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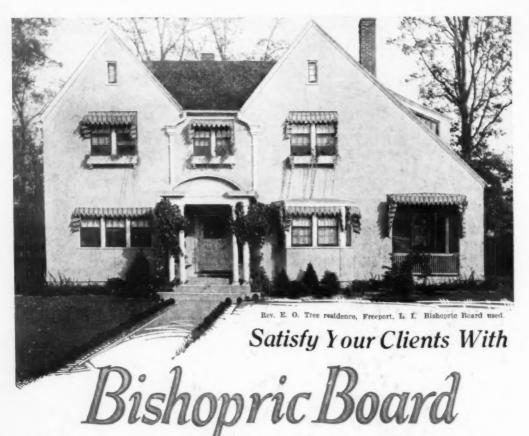
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DINING ROOM—RESIDENCE OF LAWRENCE F. ABBOTT, ESQ., CORNWALL, N. Y. PARKER MORSE HOOPER, ARCHITECT.

# THE ARCHITECTVRAL RECORD

VOLVME XLVII



NVMBER VI

JUNE, 1920

# SOME PRINCIPLES OF SMALL HOUSE DESIGN

# JOHN TAYLOR BOYD, Jª

### Part VIII Interiors-Continued

THE interior of a house should be viewed as a picture rather than as a technical effort of design. Broad unity and a harmony of effect are particularly essential, yet are not easy to attain, because the interior is a many-sided conception, in which most of the arts and crafts have a place. Amid all the variety of technique art itself is often neglected.

There is, of course, no new idea in asserting unity in art. No one questions the precept; nevertheless too few designers realize it to the full in practice. When unity is missing in interiors, usually one cause is at fault: the variety of technique which has fostered an un-

symmetrical cultivation of the whole field, as described in Part VII. Architect and decorator divide the field of the art of interiors between them, developing two different spheres of influence, which overlap at some points, and at others leave gaps for which neither feels responsible. In this division it is the architectural part of the design that suffers most. How the bad effects of this cleavage operate in many designs and how they might be avoided if the art of interiors were treated as a whole, and then properly related to the exterior part of the small house design, of lot and of elevations—all this was set forth in Part VII. However,

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Part VII emphasized the side of technique, which, important as it is, should not dominate. So it might seem as if much of the confusion of the art of interiors would disappear if attention were centered on the meaning of unity. There might then be more inspired design in interiors, instead of the too usual technical formulae. That is why, in order to make the idea of unity more vivid, it is here presented as the effect

of a picture.

But even the idea of a picture has its limitations when applied to the interiors of a small house. A broader conception is needed. In addition to the painter's desire for a harmonious, beautiful effect in color and form and light, there is the organic structural art of architect and of furniture designer—the foundation of the whole-and then also the more abstract, sensuous art of the decorator, which is largely the art of pure design. Still more than these, a fourth viewpoint enters into the conception of unity. The art of the sculptor has a place, with its modelling in planes and relief and light The sculptor's art has aland shade. ways played an essential part in most of the historic styles; has, in fact, even been supreme in certain unusual episodes, such as the baroque in Italy and the later rocaille in France. Thus all four points of view of the fine arts are combined in the design of interiors, and to them must be added the whole range of the handicrafts which were developed almost entirely for interiors.

The perfect combination of the varied arts and crafts in an interior, first one and then the other predominating in different incidents of the design, ensures the unity—the picture—that is sought. It is because of the presence of the several arts in the same design that the technique of interior art in small houses is many-sided, even though it be not very complex in each one art. What is required of the designer is a breadth of view rather than an extraordinary specific contents.

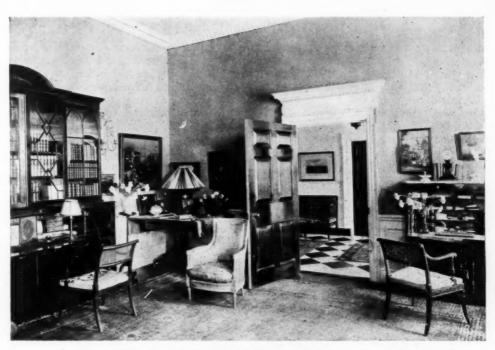
cialist ability in any one line.

The process of design in interiors is therefore a long one. It begins with the architectural shell, pictured as a whole and in its relation to the outside world; it passes through the planning and modelling of this shell of rooms and spaces, as described in Part VII; through the intermediate stage-part architecture, part furniture, of subordinate motives like doors, windows, alcoves, bay-windows, stairs, fireplaces-into the stage of furniture, and only ends with the finishing touches of the abstract art of hangings, art objects and other decorations. In all this process, rightly considered—a truth which cannot be remembered too often-there is no true line of division, no real classification into separate parts. It is one thing, and that only a part of the house as a whole.

The purpose of this chapter is to set forth some of the ways in which these different viewpoints, particularly those of the four major arts, combine in the varied process of interior design.

The interior of a small house, then, is best conceived as a picture painted in colors and light and form, which in addition bears the imprint of the conditions of site and situation outside, and which, inside, symbolizes the human interest of the family. In a sense it is a link between man and his neighborhood. Being thus a crucial point in the design of the house, it presents another reason for maintaining a delicate balance of relationships. Hence much depends upon the character of the picture, and it is evident that a theatrical quality, such as overpowering effects and the lavish display of self-advertising, however they might impress in a decoration in a public building, do not belong in the home. In other words-here is another essential which is probably the key to it allthe expression of harmonious restraint, of a fine taste, should penetrate every detail. As much as any other quality, good taste is needed in a home.

Good taste cannot be exaggerated in interiors. Even an illiterate peasantry may appreciate its value. It helps unravel the snarl of technique, especially when complexity threatens to ensnare the design. It has a bearing on the decision as to the degree of variety, of boldness, of imagination, that the artist



LIVING ROOM-RESIDENCE OF JAMES A. BURDEN, ESQ., SYOSSET, L. I. Delano & Aldrich, Architects.



LIVING ROOM-RESIDENCE OF JAMES A. BURDEN, ESQ., SYOSSET, L. I. Delano & Aldrich, Architects.

will seek. Thus good taste may decide the question of how much flexibility of design is desirable. In fact, any advice to seek variety or boldness in a design is a matter of degree, and this good taste decides. And since it is one of the most difficult decisions in art, it is worth further illustration.

At this point the reader should recall the many remarks in previous pages, asserting the value of a more flexible system of design, of originality, of the necessity of freeing interior art from formulae-particularly of the stock plan-in short, of the need for inspiration. Of an opposite sort were comments on the side of moderation, advising that art be simple and harmonious. It would seem that these offhand statements, to the effect that interest should be counteracted by restraint, were not enough. We should attempt a more specific understanding of the compromise which combines conflicting principles in

proper proportion. Some people will be surprised at the idea that principles may be connected with good taste. Good taste has been often viewed as a mystical, personal quality of the artist that could not be analyzed. There is some truth in this view: but it was held in extreme form in the nineteenth century when art was concerned with the "major" arts and preferred to dwell on the work of genius or of highly specialized talent. But now that these literary mists which have veiled art are blowing away, it may be well to examine this theory. May one not believe that good taste is evolved in a proper interpretation of the conditions of a problem, more than is sometimes admitted? The fact of the matter is, if the design be direct and expressive, it will probably be in good taste. To say this is not to rob the artist of his personal prerogative, because expressiveness in a design depends more on a clear, imaginative understanding of the deep-lying, intangible factors of a specific problem, than on an easy reading of the surface indications, which are often dangerous and deceptive. everyone knows, the greatest achievement of the artist is to interpret the intangibles.

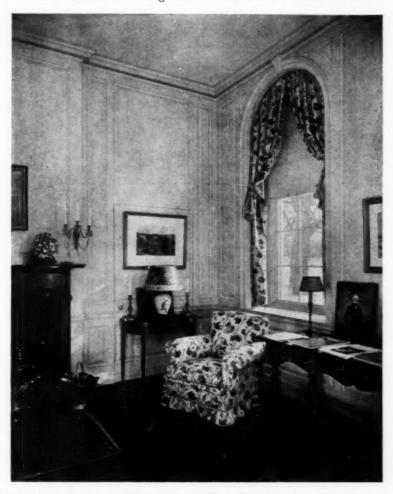
All this would seem obvious enough the principle that good taste depends much on grasping the intangible factors and conditions of design in a problem. Style, as we are beginning to understand it, depends on these intangibles, and we take a great step forward, I think, if we further realize that good taste is closely bound up with style. If once we understand style as the principle of design that native conditions and national temperament force upon us, as set forth in the previous issues of this series, almost inevitably conceptions of good taste become clearer. They seem akin to those of style. We then are furnished with criterions of judgment, of perception, which all of us can firmly grasp. On the other hand, as long as we hold to the older notion that style is a more or less arbitrary set of intellectual forms, either developed in the brain of the brilliant designer, or else borrowed by him from a foreign art, we have no real basis for judgment. Agreement is hardly possible, because the intangibles either do not exist, or, if it is a question of an imported art, the intangibles and conditions are not found here or can not be understood by Americans. In such a method the real props that support style and good taste have been knocked out. Certainly art-styles, which can reach the perfection of form and good taste only as mental feats of extraordinary gifted men, cannot be worth much to a people. If the theory of style and good taste as a personal prerogative, an abstract set of forms, were correct, that would rule out the whole field of craftsmanship, the work of humble men. Unfortunately, for the caste theory of style and good taste, these qualities are never so imaginatively perfect as in the best craftmen's art. Craftsmen's art is the despair of the academic book-andpaper trained designer in these as in other of its qualities.

Thus it seems just to believe that the only serviceable style and good taste are those of a vital national tradition, its judgments and instincts, the common

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property of all designers. This tradition helps determine the intangibles which must be expressed in design if it is to be sound. It is no drawback to the true master, since it relieves him from the heavy intellectual task of inventing ab-

art runs along in the same channels with the rest of the life of society and becomes an intimate part of it. Unless the American public can instinctively recognize in a work of art the same fundamental native characteristics that it knows



RECEPTION ROOM-RESIDENCE OF JAMES A. BURDEN, ESQ., SYOSSET, L. I. Delano & Aldrich, Architects.

stract forms, or of establishing the fundamentals of good taste; and sets his full energy free in creative art. In other words, he is entirely an artist, instead of partly a mathematician or a philosopher. And there is another benefit in such a conception of style and good taste, which is this—that in expressing native conditions and thus establishing a tradition,

in other experiences in life, it has no basis of appreciation. Not only each of the many arts, but also literary, musical, and intellectual activities will have no relation to the native temperament and its environment, nor to each other, and the existing confusion in art and letters and music will never be cleared up.

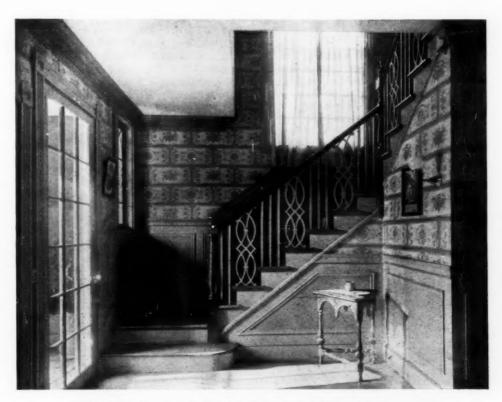
An illustration of this principle may



LIVING ROOM-RESIDENCE OF MRS. E. EGERTON WINTHROP, SYOSSET, L. I. Delano & Aldrich, Architects.

be desirable. For instance, if in decorating an interior, an American housewife is advised to acquire certain furniture and hangings and to arrange them in a certain way, because Madame du Barry once approved this scheme, she hardly knows what to say to the suggestion. But if she is told that our strong sunlight—which, like other Americans, she delights to see flood into the house, bringing out every detail clearly almost of itself requires that certain colors and designs of form be used, she has been offered a basis for decision which rests on knowledge and not on whim. She is deciding the question on a viewpoint of pure art, in principles of good taste and style. Likewise, when an American home owner is asked to live in an ornate, oppressive house, his common sense makes him ill at ease. But when the designer informs him that both the necessities of clear light without atmosphere, and of the native temperament and of American society require a simpler pattern, he easily grasps the principle. He sees the basis for the design and he may trace its development throughout all details. His interest in art awakens.

This relationship between style and good taste may be carried further in order to help explain certain doubts that have caused great controversy. These concern the tiresome argument as to the classic versus the picturesque, the symmetrical versus the unsymmetrical, the formal versus the informal. There is no need to refer to them here except to remark that, under the nineteenth century conception of style and good taste as mostly arbitrary intellectual symbols, such discussion was altogether in order. Where, however, these factors in design consist in meeting conditions of specific problems, instead of avoiding them, certain valuable truths emerge. One is that extreme classicism or formality hardly meets the needs of the American of today, or his desires, neither does extreme picturesqueness. Neither extremes are apt to arise as the natural result of



ENTRANCE HALL-RESIDENCE OF DR. E. J. CURRY, FALL RIVER, MASS.

Parker Morse Hooper, Architect.

conditions. Exceptions will be rare, and then will occur only under such distinctive conditions that there can be no doubt as to the taste. But where conditions are not forced too far, the proportion of formal and informal, or the choice between the two, will be settled by a close reading of the conditions of the problem.

Particularly is it necessary to establish a clearer idea of the picturesque. To do so, it is necessary to refer to the exterior, because its character influences the character of the interior. One of the worst tendencies in small houses is the indiscriminate use of picturesque, free motives of design, often of North European origin. They overload many houses. In former pages it was noted how these forms did not suit American conditions in respect to light, color, modeling and national temperament. Without repeating these, it may be remarked again that

much of the beauty of the picturesque North European architecture comes from the mellowness of the gloomy, misty light there. A film of atmosphere has been drawn across the picture made by the architecture, harmonizing its variety and complexity of form. In our light the same architecture looks restless and spotty. There are southern types of picturesque, which, though equally striking, have greater unity—or the kind of unity—suited to our southern conditions. Such a type has simplicity and repose in mass and surface and outline and form, pure proportion, and careful distribution of centres of interest, which are emphasized. Because the eve is strained in intense sunshine, it should be rested by effects of broad, plain surfaces. widespread pattern of decoration of architecture. like windows closely together, or a wall of bright brick

#### THE ARCHITECTURAL RECORD.

joints, defeats this purpose. Ornament is better if used sparingly, not scattered either, but concentrated, with differences in relief, so that any hardness or line or shape is softened by shadows and shade broken across it. In southern art color doors and outdoors, between the buildings, old and new, of the University of Virginia, where Thomas Jefferson and his craftsmen obeyed a principle of color that later architects ignored, among them even so great an artist as Stanford White.



DINING ROOM-RESIDENCE OF E. L. TAYLOR, ESQ., NEW HAVEN, CONN.

Parker Morse Hooper, Architect.

is a requisite; without it form crops out hard and naked. Color of a kind that brings unity through being clear and sparkling is needed, which the bright light makes richer and mellower and warmer, instead of bleaching it gray and cold.

Proof of this lies in the difference, in-

As a result the newer buildings, though finely designed in the same form as the old, have other colorations that are either dark or neutral, and are decisively out of key of the sunshine and of the vivid green foliage. It is a striking evidence that key of color is as important as form is in architecture.

#### THE ARCHITECTURAL RECORD.

Besides conditions of light and color there are also the character of the landscape that influences style and good taste. Our landscapes are broad, usually rough and often bold. They require a more solid, a broader, simpler type of design than that suited to the more delicately shaped, more finished parklike landscapes of England or of the garden country of lie deep at the roots of that great division in art between the Classic and the Gothic. It really seems to be the difference between the art of the south, of the sunlit Mediterranean with its bold dramatic outdoors on one hand; and on the other the art of North Europe, of dimmer light and softer nature. Geography dictates that one shall be in form simple,



LIVING ROOM-RESIDENCE OF E. L. TAYLOR, ESQ., NEW HAVEN, CONN.

Parker Morse Hooper, Architect.

France. If there is any truth in the principle that architecture should be consistent with the setting that nature furnishes it, it is evident that here are fundamental imperatives of taste and style which determine art in America, of which the art of the interior is only a part.

Thus it would seem that we are committed to a southern type of art in the United States. At least an art that is different from that developed by the special conditions of Northwest Europe. In fact, I am inclined to believe that these differences of climate, light, landscape, color—and the type of art they evolve—

robust, full, reposeful, even when dramatic; the other complex, more delicate, subtle, mystic. A different series of rhythms are required in each. Geography ordains that in the south the color be light, clear, vivid, perhaps with centres of intensity; and in the north that it be more neutral, or deeper, or murky. Energy and life and imagination are apt to be found in the form of northern architecture; and in southern architecture. in its color and contrasts of bold, full geometrical shapes. And if there be any who associate an idea of decadence or weakness with the south, it is only necessary to point out to them that in the

whole world no art has ever been more virile, freer, more boldly monumental, more vibrating with energy, than the art of Spain. Needless to say, also, that one can hardly afford to patronize Greek or Italian art as ineffective.

Such differences seem more fundamental than any distinctions that are made between southern and northern art Even in spirit our art can hardly be the same, because racial and social conditions are different with us, and even our geography is not identical with any part of Europe. As I endeavored to prove in previous articles of the series, we have our own type of American tradition, which was developed through two centuries far along towards evolving an art



DINING ROOM-RESIDENCE OF THOMAS W. RUSSELL, ESQ., HARTFORD, CONN.
Parker Morse Hooper, Architect.

on the basis of classic symmetry as opposed to free, picturesque art. It should be remembered that the south has a characteristic free, picturesque type of its own, which is akin to the symmetrical "classic" type in the qualities just mentioned. It does not resemble the picturesque types of the north in spirit. Natural conditions in the south and north dictate a difference in spirit that extends to all types of design, whether symmetrical or not, formal or informal.

Of course, although the style and taste of our art should be southern, that does not mean that we copy literally the art of the Mediterranean in the United States.

that suits our peculiar needs. It marks out the road to be followed with energy and purpose, and style and good taste are more eloquently taught in its models than is possible in any writings.

This idea of a southern or classic mean—or vein—that runs through American art, imposing restraint yet allowing expression to the energy of our race and time, helps fix the degree of flexibility in design. If there is necessity for a flexible conception of design to meet conditions, it should be realized that it is only of value for that purpose, and should not be pursued for its own sake. It should not in its turn become a recipe for design.

Specific instances of this have been at any rate, whatever its sources, it is pointed out in former pages and they need not be repeated here.

These are some of the principles of style and of good taste, two factors which are so closely identical. Such a concep-

known over the world and in France as le gout français. Le gout français saturates the work of any Frenchman, whether he be an impossible radical or a reactionary, drenching it in Frenchi-



STAIRWAY-RESIDENCE OF WALTER H. CRITTENDEN, ESQ., CORNWALL, N. Y. Parker Morse Hooper, Architect.

tion is held among the French, the one people in the modern world which is the most easily artistic. The French maintain an uninterrupted tradition, yet are always reinterpreting it freely and freshly in the spirit of the times. How much of it is the result of nature and how much of race, of course, no one can say. But

ness. It simply means the French taste and style.

This ends the consideration of the principles that, it may be conceived, in some measure form our ideas of style and good taste. As stated above, although they pertain largely to the exterior of the house, they must largely govern the in-



STAIRWAY—RESIDENCE OF WALTER H. CRITTENDEN, ESQ., CORNWALL, N. Y. PARKER MORSE HOOPER, ARCHITECT.

terior, because they are so fundamental, because the interior cannot be divorced from the rest of the household, and because the intimate humanness of the house interior make them so vital there. It remains to set forth some of the ways in which they are incorporated into the interior design.

Where the four major arts and most of the handicrafts are combined in a design, as they are indoors, they do not all necessarily operate in the same way. Some or one of them may symbolize the main interest; while some, or one, may embody most of the unity. For instance, where the architectural shell is simple and severe, the interest may be emphatic in minor architectural motives or in furniture and furnishings. Where the architectural shell is more diverse in form, too much interest in details might make it split into parts, appearing restless; hence the details may be most harmonious, even inconspicuous, or very sparingly used, just enough to prevent bareness. Countless examples of these

ideas can be presented.

There is the case of many of the interiors of Mr. Charles A. Platt in great houses, where big, simple, almost squarish rooms are splendidly decorated with monumental motives of architecture on walls and ceilings, and a fine display in decorations. Besides, the big squarish shapes and the scale of the rooms are repeated in the architectural motives and the furnishings. Mr. Colby' carried out this scheme in a way expressive of the small house in his living room illustrated in Part VII. This is a squarish room, appearing large, and its fine character lies in the south window, with its concentrated light, also-which should not be forgotten-in the long plain wall surface opposite, which offers a contrast and a background; in the beamed ceiling and in the interesting furniture and decorations. On the other hand, Mr. Parker Morse Hooper's interiors, of boldly designed architectural shell, are tempered with simple harmonious furniture and decorations. Among rooms of irregular shape none are more beautiful than the living room in the home of Mr. A.

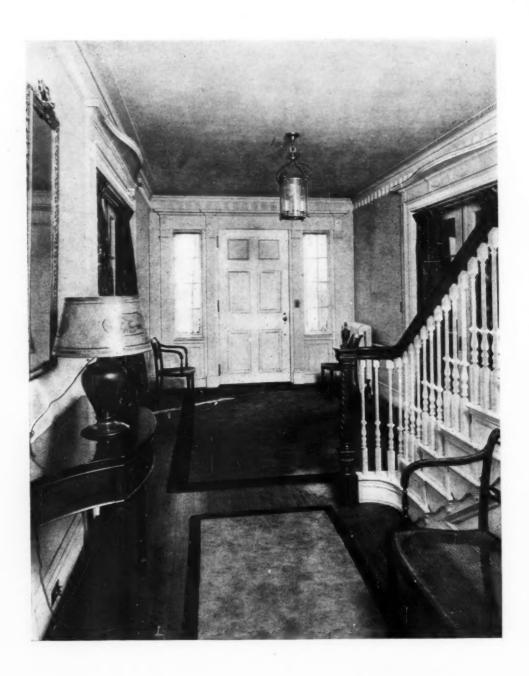
Stewart Walker, the architect, illustrated in The Architectural Record of last July. It will repay thorough study to perceive the ways in which the unusual variety of plan of the room was harmonized by the furnishings and architectural details, which prevent it from seeming loose in form and dividing into parts. It is such a room as would appeal to a painter.

Of the place of the sculptor's art of light and shade and modeling in planes and relief, there are not so many striking examples in the houses of today as there were in some of the historic styles, like the baroque or rocaille, where the sculptor, even if an architect, held sway throughout the design, repeating his imaginative, sensuous shapes and curves in walls, ceilings, architectural motives and details, and in the furniture and all the art objects and decorations. Naturally such exuberance hardly comes within the field of the American small house, but the principle of the sculpturesque qualities in design is a good one, and it may often be well worked out in minor details of architecture and furnishings.

Always, in this union of the arts and crafts in the interior, the balance should be kept. If one art leans far toward variety, the others may set up a counteracting restraint, yet not aiming to conceal or to negative the expression. If all were equally bold and imaginative in the same room, the unity of the design might become theatrical or exaggerated in one

direction.

All these principles of design have dealt with the interior as a whole. Next to them in importance are the considerations that appear in the design of individual rooms and spaces of the small house. One of the first of these is the expression of function in a room. Decorators understand this well in their part of the design when they declare that a dining room should appear as a place for eating, that a reception room should have the expression of a place where guests are received, and so on. This is, of course, a sound principle; but its first application should come as much as possible in the architectural shell of room or space. This again reveals a further



ENTRANCE HALL—RESIDENCE OF ANDREW MORRISON, ESQ., MONTCLAIR, N. J. WILLIAM EDGAR MORAN, ARCHITECT.

defect in the unvarying use of the boxlike room in the stock plan, which too often makes impossible any distinctive character in the room and reduces decoration to formulae.

It is not necessary to enter at length into the ways in which each space of the interior may take on character, but one may point out certain features of the process. This is a principle of planning and has been treated to a large extent in former issues.

The position and arrangement of the entrance stairs were referred to at length in Parts IV and V. The possibilities of interesting, expressive and more compact arrangement were covered. Here also the need for proper circulation comes into play. If the stairs are to ascend from the living room, they may well be near the front entrance, otherwise the path of circulation from entrance to stairs will cut across the living room, where people will wish to gather undisturbed; that is to say, the function of hallway must not be overlooked in combining stairs with other rooms. stairs may also be planned for access to service portion or a secondary outside entrance leading to garage. Whatever be the arrangement, the stairs affords many interesting opportunities for design.

It is the design of the living room, in combination with or relation to the dining room, that may yield great possibilities. The linking of spaces together, to gain effect of space or to preserve individuality, described in Part VII, should be recalled here. The essential in this flexibility is, of course, the plan, which may express function in many ways through the use of technical motives, such as stairs, stair landings, bay windows, alcoves, fireplaces, etc. Even an ordinary living room has functions of lounging or reading or entertaining which may appear in the plan and in the architecture of the room. Where other functions, such as dining, are added to the living room, they may also receive expression in its design, at least so much as will not destroy the unity. Excellent examples of this manifold expression of functions of a living room in plan, and

therefore in shape, are the living room, in Part IV, of the house of Dr. T. J. Abbott, designed by Mr. Parker Morse Hooper, and also the living room in the cottage in Connecticut designed by Murphy and Dana, in Part VI, in each of which was planned a place for meal table, and service to it, for entertaining visitors, for lounging-every function kept distinct from the others. A living room as large as 18x30 contains great possibilities in providing for all sorts of human use in its shape, even to quiet corners or retiring spaces, where one person may be apart while others are gathering elsewhere in the room.

The relationship of living room to outdoors through transitional spaces, such as bay windows, porches, or breakfast rooms, was mentioned in Part VII. Here is another case where much commonplace, perfunctory design occurs, in their resemblance to greenhouses or even to a factory, a resemblance which extends to the tiresome use of lattice, though this latter practice is not so much followed as formerly. Such transitional spaces should have a well developed character, expressed in various ways—in the design of glass in relation to wall spaces and piers so as not to lose solidity or acquire looseness; in use of rougher textures, brighter colors, greater contrasts, bolder shapes, change of materials; more charm and vivacity of details, like iron or brass, and the use of plants and flowers.

These principles of functional expression extend to all parts of the house, even to design of bedrooms and of service portions. In bedrooms, good taste at least is well established, in a simplicity of design and decoration that only needs more interest and charm of shape of room and proportioning of window illumination to make these chambers one of the best parts of the home. Often they are too much cut up with doors and windows to have all the air of repose that is desirable; although, in this connection, it must be remembered that the heat of our summers calls for cross-ventilation from windows in two walls wherever possible. As to the service portion, that will be dealt with in a later article;

but it may be remarked here that there is much room for good taste and interest of design in such parts of the house without encroaching upon the strictly practical character of its dispositions. Since of recent years grim economic pressure has forced the housewife to spend more time in the service part of the house, she has found means to make it take on attraction in an artless way. Kitchen and service are not only much more practical now, but they are not so shop-like

as formerly.

Leaving these many ideas of design of individual rooms and spaces, the more subordinate aspects of details of interior architecture come next in order in this examination of the progress of design. With this, a wide field opens indeed. It is a crucial point in the design of a room, for it forms a transition, a linking in design between the architecture of the room shell and the furniture and furnishing. The same principles of design are found in these minor motives as in the larger features of the house, and they are now well handled by American architects. They furnish endless opportunity of interest and charm, and, in a rectangular shaped room, they furnish a large part of the character, if not all of it. Such an example was the living room of Mr. Frank A. Colby's house in Part VII. One may call attention, however, to two great faults in the details of American interiors. One is inconsistency in shapes; and the other is overemphasis of lines, rectangles and other angles.

The disharmony of shapes in American interiors is, I am forced to believe, largely a matter of faulty, even careless, practice in design. This assertion seems proven by the fact that it is found less in rooms that are elaborately designed with paneling and similar architectural motives, where the designer has been obliged to make careful detailed drawings. Too often smaller rooms are designed by proportioning the windows with regard to the exterior solely, and merely figuring sizes of doors and other openings on the

plan.

Had the designer taken the trouble to make even a rough scale drawing of the rooms of the wall, he might have noted an inconsistency in its shapes that could have been easily remedied with perhaps only slight changes. Fat, rectangular shapes, without real proportion, inharmonious with other shapes of decoration, easily creep into design. While one should avoid the error of laying down dimensions in design, it seems clear that, in the living portion of a house, a double doorway, 6 feet 8 inches high and 4 feet or less wide, is apt to yield a better shape of casing and pattern of door paneling than one 5 feet wide, or even 4 feet 6 inches wide. Such fat rectangularity is particularly hard when emphasized by a color contrast, and it is at its worst when used side by side with flowing curves, like ellipses or ovals or semi-circles, or else with complex architectural motives such as the orders. The basis of most architectural design is the purpose to depart from crude, primitive angularity, and it must be thought that the attempt to use these two extremes in the same design shows a lack of sensitiveness to form and a perfunctory comprehension of the real meaning of motives of design. Yet this fault runs all through American architecture; it may be seen in elevations and even in the design of gardens, and in the shapes of pools and fountains.

In small houses consistency of shape and harmony of measures and change from straight line to curve are extraordinarily important, because small house interiors are usually simple and disharmony is only too easily noticed in them. This quality really marks one of the distinctions between the amateur and the professional. It is seen at its best, as far as the small house is concerned, in the early American rooms. Any comparison of a drawing of the elevations of the walls of an old room, even a simple one such as a kitchen, with some modern rooms that somehow seem to lack sureness and harmony, is apt to show distinct superiority in mass, shape, proportion and line in favor of the old model. reason is that the old model was designed by craftsmen-right "on the job"-by men who knew instinctively the difference that an inch or two in height, and espe-



LIVING ROOM-RESIDENCE OF ANDREW MORRISON, ESQ., MONTCLAIR, N. J. William Edgar Moran, Architect.

cially width, of a window or door meant before they built it into the walls of the room.

The other vice of contemporary design, excessive lines and hard lines and angles, is everywhere apparent. It stands ruthlessly revealed by our clear native light, even in interiors. This is where the sculptor's ability to soften hard lines and edges, by his modeling in light and shade, is of great value, as well as the technique of the painter who knows how to blend over edges. It is an evidence of the need of color and of texture in interiors, if any were needed.

Texture is, of course, important in an interior. Nothing adds more quality in design, provided it be not overdone, as it often is at the hands of certain designers, where it partakes of sophistication, or an extreme affectation for the rustic or the antique. At any rate, we are getting away from hard, machine-like surfaces. Another fault of current design in interiors may be noted; that is, the use of brick surfaces whose coarse

texture and crude checkered pattern of joints are at variance with all the rest of the room. Often a brick fireplace facing is the most aggressive feature in a whole room. Only seldom have I seen brick used successfully indoors, and then only where it is done boldly and consistently with certain other materials, in broad masses, largely in semi-outdoor spaces like sun-rooms or loggias.

All this architectural detail should harmonize, even combine, with the furniture and decorations. The modelling and texture and scale of cornices, belt courses, casings on walls and ceilings and the details of features, like bookcases, window seats, mantels, cupboards, alcoves, should be wrought with the furniture in mind. Indeed, some designers prefer to talk of them as furniture rather than as architecture, and hold that they should portray a freedom and fancy of form -within proper limits—which take them far from the sober appearance of more strict architectural forms. This flexibility, leading to a sculptor's viewpoint of

pure form, is all the more permissible, since these features, even if fanciful, are bound to derive solidity in any case from being incorporated in the walls, the bold planes and angles of which they relieve, aiding in the effect of transition from architecture to furnishing. Again, for illustration, one must point to the early American craftsmanship whose wealth of fancy and sense of equisite form yield richest inspiration in these details.

This tradition of American craftsmanship is now so well re-established in design in the eastern part of the country, that it needs no further illustration. I would, however, except the fireplace, yielding it at least a brief remark. The fireplace is the ultimate symbol of the home, the hearth itself. The oldest human interest in the world centers in The home owner who appreciates its significance, as so many do, takes the keenest pleasure in the design of his hearths, with their chimney breasts and mantels. In no feature of the home is there more opportunity for design, and art has always been lavished upon it. If one may explain the keynote of its design, he may say that it is wholly a frame, a setting for the fire on the hearth, with light and flames playing against gloom and darkness. However complete a unit the mantel or enframement may be, it should always enframe the fire. American tradition has a bewildering variety in hearth design, now well known, that is replacing the perfunctory types still too often found. Some designers still feel that small fireplaces are required in small houses. Distinctly this is not true. In some old houses the fireplace will occupy almost the whole wall of a small room. In Part VII. Mr. Colby's towering living-room fireplace shows another model. This is of Italian inspiration, offering a large black background for a small fire, if desired, in scale with the room. In contrast to

this is the commonplace formulae of living room fireplace, 3 feet by 4 feet opening, with mantel shelf slightly over 4 feet high and bedroom fireplaces somewhat smaller. In fireplace design too much emphasis cannot be placed on the facing of the opening. This is an integral part of the fire enframement, and one of the crudest devices in interior design, as remarked above, is to make this of brick with strongly marked joints. If a better material cannot be had, the brick may be painted a dark deep color, black or even a rich purple red, such as I once saw in an old fireplace on Nantucket. In fact, if I were asked to name the three worst minor faults in house design, I would list them as strip panels, glass panes in interior doors, and brick fireplace facings. Yet who of us has not committed them at some one time or other?

It is not necessary to go further into this architectural detail of interiors. Interior decoration, so-called, will occupy the next issue of this series. Here one may conclude by saying that the tradition of beautiful interior design in our early American provides us with more ideas than can be set down in volumes. We need only to learn its vocabulary through a study of its best models, and then learn to apply it imaginatively and expressively and accurately in the houses of the day. We may well incorporate into this tradition our American notion of modern ideas of color and design that are coming back into civilization with a fresher spirit. But the older American tradition is needed to supply the foundation of firmness and consistency and vigor, to give both life and purity to the pattern of form and color of all the arts and crafts that is woven into the unity of the interior. Only in that way may the picture have taste and style. Taste and style are the channel through which the art of a people flows.

## The MODEL FOR THE BAHAI TEMPLE. CHICAGO

LOUIS J. BOURGEOIS, ARCHITECT

J. R. Reid

attracting much attention from archi- and Arabic in the intricacy and beauty of tects. It is of unusual interest from ornamentation. several points of view. The Temple is a Renaissance in line and Gothic in the in-

new and original form in architec-ture—"the first new idea in architecture since the thirteenth century," according to Mr. H. Van Buren Magonigle. Beautiful in the harmony of its proportions, it has in addition a singular charm in its symbolism; and to the psychologist it is noteworthy, because the creator declares: "It is Baha Ollah's temple. am only the channel through which it came.'

In form the temple is a nonagon, or n i n e-sided structure, and its lower

story offers a complete innovation in architecture in the use of nine inverted half circles, with a great doorway in the centre of each, so that from whatsoever side one approaches the edifice it seems to extend its arms in welcome. From dome to foundation it is a unique creation and unlike any building in existence, yet one reads in its curving beauty the story of the architecture of the world. The first floor in its simplicity of line suggests the

HE model designed by Louis J. Greek and Egyptian temples; while the Bourgeois for the great Bahai treatment of the doors and windows is Temple to be built in Chicago is Romanesque in form, and both Gothic The second story is

> terlaced arches of its openings. The third is restful, quiet and Renaissance in treatment. Above it rises a lovely dome, suggestive of Byzantine forms; but above the closed top rise other beams of the dome itself like hands clasped in prayer, so that the dome gives the feeling of ascension and aspiration found previously in the Gothic towers alone.

In the geometric forms of the ornamentation covering the columns and surrounding windows and doors of



LOUIS J. BOURGEOIS.

the temple, one deciphers all the religious symbols of the world. Here are the swastika cross, the circle, the triangle, the double triangle or six pointed star (or Solomon's seal, the magic symbol of mecromancers of old); but more than this, the noble symbol of the spiritual Orb, or Sun behind the Saviour of mankind; the five pointed star, representing the man saviour-Christ or Buddha or Mohammed; the Greek Cross, the Roman or Christian Cross; and, supreme above all, the wonderful nine pointed star, figured in the structure of the temple itself, and appearing again and again in its ornamentation, as significant of the Spir-

itual Glory in the world today.

The nine pointed star reappears in the formation of the windows and doors. which are all topped by this magnificent allegory of spiritual glory, from which extend gilded rays covering the lower surfaces, and illustrating, in this vivid and artistic limning, the descent of the Holy Spirit.

Curiously enough this Descent of the Holy Spirit was the first thing Louis J. Bourgeois pictured in his drawing of the temple. He said, "I did the doors and windows of the lower story first, and

then I got the entire form."

The numbers 9 and 19 recur again and again in the structure of the temple, illustrating its basic principle of Unity— 9 being the number of perfection, containing in itself the completion of each perfect number cycle, and 19 representing the Union of God and man, as manifested in life, civilization and all things.

His description of how he made the model is as interesting as the structure itself; but in reading it one must remember that Bourgeois is an architect of long and wide experience. He built Gothic churches in France; then he built them in Canada. His buildings are found in Chicago, in California, where he erected and planned the well known house and garden of Paul de Longpré, the flower

painter, and also in New York.

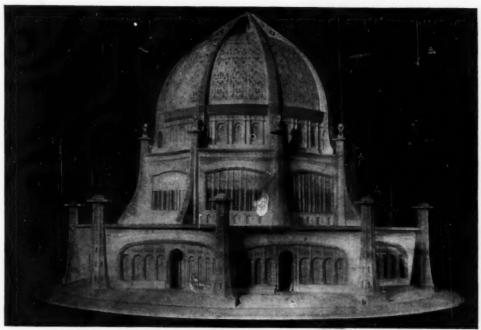
Twenty-five years ago he had a remarkable spiritual experience, through which he came into a knowledge of his spiritual self, as well as his physical man. Then he was told that some day he would build a great temple, and he made a sketch of a circular twelve sided building, at that time. Henceforth he dreamed of his temple, and tried to make a drawing of it, but could not. He became interested in the Bahai Movement, and nine years ago made an architectural drawing of a temple, in order that he might be represented in the competition spoken of at that time for the erection of a Bahai

temple in Chicago; but he said then, "This is not my temple, I am only putting it in to get a chance in the competition. If I win, I can draw the real temple."

But the competition never materialized, and four years ago, when he returned from the Bahai convention in Boston, Bourgeois suddenly, in an hour's time, sketched the lower story of his temple. But he could get no further, and half dazed by the ornate splendor of this fragment realized that he must model it, because he could never express on a flat surface the many-faced beauty of its He endeavored to cut into the plaster the intricate tracery of ornament he saw; but he had never done such work, and he was obliged to ask the help of a friend skilled in the art, and after half a day's training he went at his task successfully. He did each successive story in this way, modelling the beauty in plaster as it was revealed to him, never seeing the whole, yet saying to himself constantly, "How do I dare go on? Because this is so wonderful; and how can I make a dome wonderful enough to complete it?" And then always the thought would come, "The Power that is giving you this will give you a dome the most wonderful of all!"

So he did the first story with its welcoming arms, and the second with its Gothic elegance, and the third with its Renaissance quiet and beauty. morning he wakened suddenly at three o'clock and knew that he was to draw the dome. He was very happy; and as his fingers flew on for a rich hour, he knew that the dome was the most wonderful of all. That is why he says, "It is Baha Ollah's temple. It is not mine!"

There is another side to this temple story, which is both human and appealing. It has to do with love and comprehension and faithful service. The architect is not rich, and he realized that if he worked at his model the family income would cease, and perhaps no one would ever build his mighty temple. His wife is also an artist, but she bought a little notion store in West Englewood; and while he worked on the model, she sold ice cream and candy. When he needed



MODEL OF THE BAHAI TEMPLE, CHICAGO. Louis J. Bourgeois, Architect.

clay for his first modelling he was out of money, so he went into the garden, filled his wife's clothes basket with Dorothy Perkins roses, which covered the arbor. He took them to New York and sold them for five dollars, with which he bought his clay.

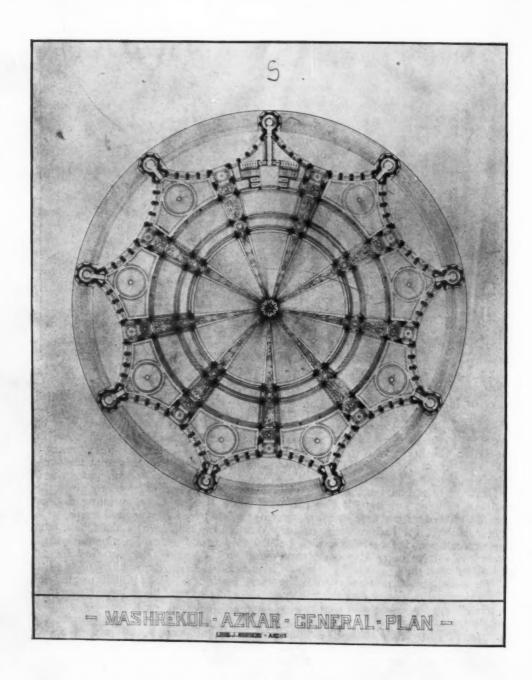
He though he could make the model in three months, but it took him three years, and he says his wife is really the temple builder, for had it not been for her sympathy and cheerful sacrifice he never could have carried to completion

the gigantic work.

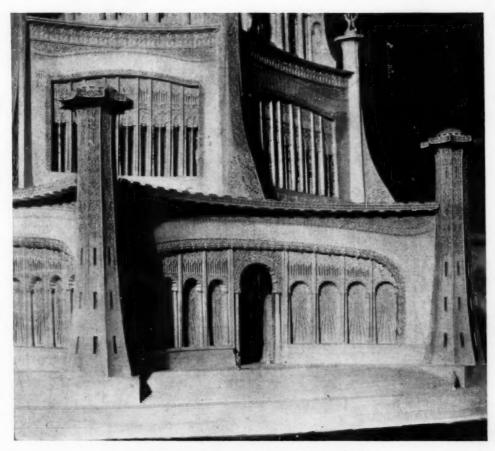
The model is now on exhibition at the Kevorkian gallery in New York City. It was chosen for erection in Chicago by the delegates to the Bahai Convention, held recently in New York. Its original plan demands a building 360 feet in height, and 450 feet in diameter; but these figures will be halved for the Chicago structure, making a dimension of 180 by 225. The building constructed in this size will cost somewhere near a million and a half dollars.

One naturally asks what is behind such a conception and what it means for humanity. The Bahai Movement, which is planning this stupendous creation, is the great international movement of Unity and Brotherhood, which arose in Persia in 1844 and extends its branches and its influence everywhere at the present time. It was first taught by Ali Mohammed, who was presently given the title of Bab or Gate, meaning a door opened between heaven and earth. He foretold the coming af Baha Ollah, who he said would appear in nineteen years, and would be the Glory of God for all mankind through the nobility of his life and teachings. Baha Ollah means the Glory of God, and his influence, penetrating all mankind in the Glory shining through him, will at length unite all religions, all nations, all races-banishing hatred, rancour, partisanship in the great love which rises through realization of the Fatherhood of God and the true brotherhood of mankind.

Baha Ollah died in 1892 in the prison town of Acca, Syria, to which he had been sent by those persecutors who, as in the case of all the Prophets, could not distinguish light from darkness. He left



PLAN OF THE BAHAI TEMPLE. LOUIS
J. BOURGEOIS, ARCHITECT.

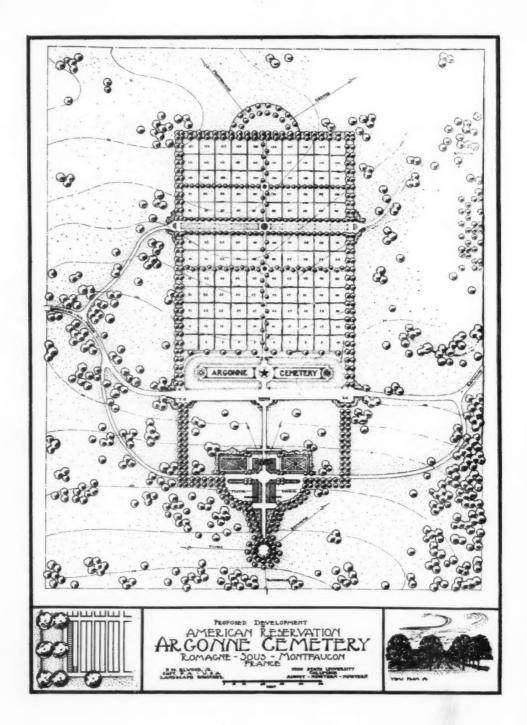


ONE OF THE NINE ENTRANCES, BAHAI TEMPLE.
Louis J. Bourgeois, Architect.

the leadership of the movement in the hands of his son, Abbas, also a prisoner, saying, "I have established a new covenant between God and Man, and my son is the centre of that covenant."

His son took the title of Abdul Baha, or *The Servant of God*, literally, the *Slave of the Glory*, and the name of Abdul Baha has already become known everywhere, the synonym for service, love and wisdom. He was freed from imprisonment in 1908, through the action of the constitutional revolution in Turkey, and since then has travelled in western countries, visiting America in 1912.

The Bahai Revelation, as it is sometimes called, inspires a movement, not a sect. It has a very slight organization embodied in a Unity Board, which manages the Temple fund. The temple will be a great place of worship for all mankind. Its doors will never be closed: no priesthood will ever officiate within its walls; about it will be gardens and fountains; and beyond these, a series of buildings devoted to the application of true religion to life, a hospital, an orphan asylum, a hospice or house of hospitality, a guild house, a university, etc. Only worship can be voiced in the temple itself: but the results of such worship are to be evidenced in these surrounding buildings, where all activities of the community will meet in the comradeship inspired by mutual counsel from which criticism and politics shall have been banished.



#### THE ARGONNE CEMETERY OF THE A.E. F. AT ROMAGNE-SOUS-MONTFAUCON FRANCE

BY P. H. ELWOOD, JR.

ARING for the dead is one of the most trying tasks to be performed by an army in the field. However, the problem was not so complicated for the American army as it had been earlier in the war, when large areas frequently changed hands several times during the active fighting. Ground once gained by the Americans in France was never relinguished to the enemy except for most temporary retention. The duty of identification and burial of our dead was assigned to the Graves Registration Service of the Quartermaster Corps, whose burial parties followed closely upon the heels of the advancing soldiers, often under heavy shell-fire.

During and immediately following an offensive, graves were necessarily shallow and hastily located near where the body fell. One of the two identification tags carried by every soldier in the field was buried with the body and the other attached to the temporary cross marking

the grave.

One thing that made the later work of complete identification and rechecking difficult was the fact that, before going into the front lines, the man's organization was usually scratched from his identification tags to prevent this information from falling into the hands of the enemy. This, coupled with the circumstance that among the army in France literally hundreds of men bore the same name, made definite identification impossible in many cases. The personnel department at the Central Records Office has some exceedingly interesting and almost unbelievable figures on this subiect.

Soon after the armistice, the recheck began of all American bodies buried in the battle areas. The temporary crosses were painted and complete identification made where possible.

Small metal tags with all available information, such as organization and time of death, were placed upon the crosses and the graves arranged carefully and mounted neatly. Detachments of engineers were called upon to assist in definitely locating each grave by coordinates and making sketches drawn to scale, showing just where each body was in the sector. Blue prints were made of these sketches and a complete file was kept for the future work of the concen-

tration parties.

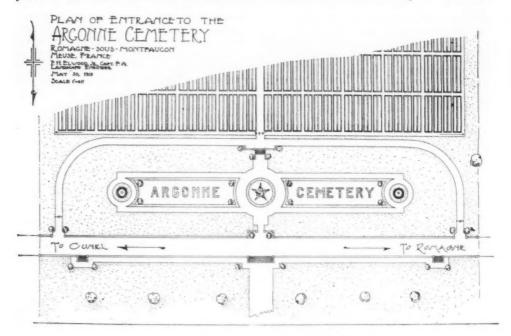
The work of concentrating the bodies into several large cemeteries was begun early in 1919. The location of these concentration cemeteries largely a problem of transportation and convenience to the majority of individual The British Imperial War graves. Graves Commission chose to bury their dead in small units of a few hundred bodies, thereby gaining a degree of seclusion; and in some cases the little burying grounds may be seen surrounded by groves of fruit or other trees pro-

tected by a low wall.

It was decided early in the work to concentrate as many as possible of the American dead into large cemeteries, in view of the possibility of having to remove the bodies later to America. Therefore, Lieutenant Gove S. Wright, Chief Concentration Officer, after supervising the building of the cemeteries at Château-Thierry and Belleau Wood, located the three main American cemeteries at Beaumont, Thiacourt and Romagne-sous-Montfaucon. Romagne, the subject of this article, to be known as the Argonne Cemetery, lies practically in the geographical center of the Meuse Argonne sector, north-west of Verdun and southwest of Dun-sur-Meuse.

The site of the cemetery is on the edge of the little village of Romagne, on a gently rolling hill opposite a more abrupt slope partly covered with old apple trees. The neighborhood witnessed some of the severe fighting of the later days of the Argonne offensive. Cunel, a hamlet within sight of the cemetery, was taken by the 5th American Division with difficulty. The ground on which the cemetery now rests was filled with shell holes made by American 75s and 155s.

Historic Montfaucon with the famous observing tower of the Crown Prince is just to the south-east and within full the work was well under way, it became necessary to call in all the available German prison labor in the sector to assist in building camp roads, laying water pipes, grading, laying sod, building walks, and planting. The supply of coffins from Paris ran short due to limited rail transportation, making it necessary to construct the coffins on the spot. This was



view from a part of the reservation. Of course, practically all buildings for miles in every direction are now in ruins or unfit for habitation, though as soon as work on the cemetery began the long-suffering French peasants began plodding back to the remains of their former homes

It soon became evident that the most important problem was transportation for moving the bodies to the cemetery. In response to urgent calls from the Camp Commander, Col. Chapman, the Motor Transport Corps ordered over 500 trucks with the necessary repair units to Romagne, all under the Camp Motor Transport Officer, Capt. John C. Cashman.

When this force had been obtained and

done by setting up several portable saw mills and combing the country for lumber. At the end, the local box output nearly supplied the demand.

Materials of every sort used in modern warfare were to be had in any quantities at a huge German supply dump at Brieulles, a few miles away. From this dump we obtained all our wire and iron posts for fencing the reservation and for the fence around the cemetery itself. Every fourth post was set in concrete, also obtained at the same dump.

Until nineteen days before General Pershing's visit of dedication, we had bent most of our energies toward concentration and on camp work; but from then on we used practically the entire force of prisoners, at times over 4,000,



Entrance to Cemetery as constructed when American troops left, July 4, 1919.

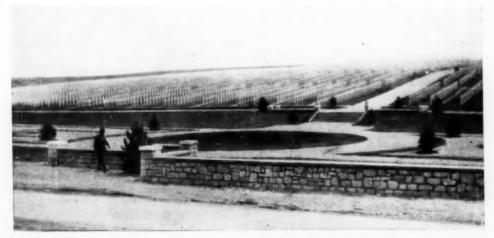
besides several hundred pioneer Infantry troops from the 815th and 816th regiments, upon the engineering and land-scape construction work.

Much grading and draining, as well as removing of temporary buildings and accumulated debris, were necessary before any finished landscape work was possible.

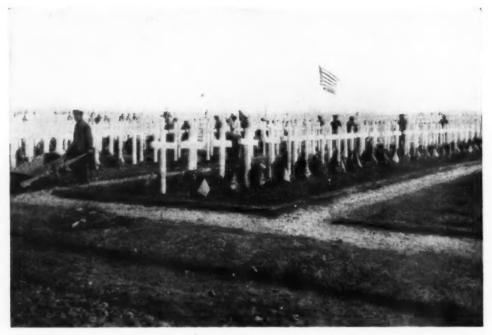
The design for the approach roads and the landscape setting having been made and accepted, its execution was rushed with all possible speed in order to have the cemetery ready for inspection and dedication on Memorial Day by the Commanding General.

When he arrived, he found a white wooden cross, a spray of evergreen and a small American flag at every grave on the hillside. Two large grass and gravel panels, with twenty-foot turf letters spelling the words "Argonne Cemetery," stood out prominently on either side of a central circular pansy bed with a thirty-foot star of bright golden pansies. It had been necessary to make several trips to Luxemburg to obtain these plants. The evergreen trees used were obtained from the French near Verdun.

Interesting features of the design are a rising grade toward the main central walk or drive, from both sides, and a



Central pedestrian entrance, showing the forty-foot pansy bed with its gold service star of yellow pansies. The stone walls with concrete coping were built by German Prisoners of War.



German Prisoners of War policing the Cemetery after decorating each grave with an American flag and a spray of evergreens for the dedication services, Memorial Day, 1919. Each grave is marked by a four-foot wooden cross with the name and organization of the soldier.

sunken entrance-garden in the area between the public highway and the cemetery proper.

For miles in every direction there was nothing but waste and destruction, and the cemetery as it neared completion seemed to those of us who had been in the devastated area since early fall, something in the nature of an oasis in a desert.

As to costs no record was kept, as nowhere in civilian practice would like conditions be encountered where labor and materials were to be had for the asking and motor transports doing the work of the railroad and men the work of horses and machines. As an example, no plow was available; so several gangs of troops, some 500, were set to work spading up a field of several acres. When this was done the improvised drag pulled

by a mule team was found ineffective and too slow, so more troops with picks and shovels were ordered and a clod crushing race started across the field.

As an illustration of the pressure and speed of the work, the main entrance steps to the cemetery proper, seven in number and twenty feet long, were erected in one day from the foundations, and they were built to last in heavy concrete and stone.

After May 30, much finishing and polishing was done, the front wall constructed and the roadways resurfaced, giving the whole area a much more finished appearance, so that when the last troops broke camp the morning of July 4, they left with a feeling that they had given the brave boys buried there a worthy resting place as a lasting memorial to the real sacrifice of America.

## The GUARDIAN SAVINGS AND TRUST COMPANY'S BUILDING

CLEVELAND, OHIO

WALKER & WEEKS, ARCHITECTS

By Philip Lindsley Small

HERE are many institutions in the commercial life of a large city, which, by reason of the nature of the business they transact, are limited in their location to a certain definite areathat area in which they can transact their business with the greatest degree of efficiency. Thus we very often find, as distinctly segregated districts, the Wholesale District, the Market District, the Newspaper District, the Retail District, the Financial District; and, in a wellorganized and comparatively stable community, whatever expansion takes place must take place within that district or otherwise encroach upon the territory of another. A general readjustment on a large scale of all the elements is seldom possible at the present stage of development in most of our cities. Hence, when an institution like a large banking and trust company has outgrown its present accommodations and must expand, something within the so-called Financial District must give way to this expansion; and, with the high property values of such a district, and the difficulty of finding purchasable property at all, the proplem is indeed not easy to solve.

In the city of Cleveland all of the larger banking institutions are located on Euclid Avenue, within a space of a couple of hundred yards, the busiest and most congested portion of the city; a fact which would seem to indicate that these institutions consider it indispensable that their main entrances at least should be accessible from this portion of Euclid Avenue. Thus they are, and always will be, confronted with a very difficult problem. They are all rapidly outgrowing their present accommodations and are in more or less urgent need of enlarged space and yet it is within this short reach of two hundred yards that they will all, no doubt, remain. This will sooner or later mean one of three alternatives for each of them: (1) tearing down one of the comparatively modern office buildings of the district to make room for an entirely new plant; (2) enlarging their present building, or, (3) converting the lower floors of some other building to their needs.

This last alternative has, in a measure, been adopted by the Guardian Savings and Trust Company, which institution solved the problem of expansion in rather a unique manner, adding to the district one of Cleveland's largest and most complete banking plants, without disturbing the functioning of the business already located on the property utilized. In their plan of improving this property they have acknowledged that the main issue was largely centered, not in a broad Euclid Avenue frontage, but in an entrance on that thoroughfare. They have consequently utilized for the most part the rear end of their property, at the time occupied with very poor structures, and by so doing have carried out their project of expansion without displacing any of the stable business enterprises on Euclid Avenue.

The New England building, with one hundred and thirty-three feet of frontage on Euclid Avenue and covering the front sixty feet of depth of a plot extending two hundred and fifty feet to Vincent Avenue, was sixteen stories in height and every office occupied. The west half of the building and a two-story extension to Vincent Avenue was occupied by a small department store, which was on the point of moving to larger quarters. The east half and a one-story extension to Vincent Avenue was occupied by the

largest book store in the city.

It was determined to leave the exterior of the old building unchanged, except for a new monumental façade to the lower four stories; to provide a public arcade from Euclid Avenue to Vincent Avenue, giving to the bank the west and larger portion of the plot, to include a basement, the entire first floor and parts of the second and third floors; allotting to the book store the east portion to the depth of one hundred and forty feet and including a basement, first and mezzanine floors. On Vincent Avenue and in the north end of the arcade were to be several small shops. In addition, the building was to extend the full height of two hundred feet allowed by the city, from Euclid to Vincent Avenues.

This, in general, was the problem that

was confronted at the outset.

The existing building greatly hampered the development of the plan, which would have been difficult of solution at best, considering the irregularity of the lot (page 517), the difference of levels and the requirements laid down by the bank. In fact, from the commencement of the preliminary study to the final completion of the building it was a series of adjustments and readjustments-shifting, restudy, and the surmounting of one obstacle after another, in exemplifying which it might be mentioned that the plans of the old building showed steel columns throughout, and yet, when wrecking was commenced, the columns supporting the second floor were found to be cast iron and much larger than those they had anticipated finding. Upon excavating, it was found that the footings of the adjoining building projected from five to twelve feet beyond the property lines, so that the steel framework, already completed in design, had to be changed and the party walls supported on cantilevers. Such changes in the steel framing in most cases necessitated a complete restudy of the interiors affected. How serious these changes were it is now impossible to judge, in view of the fact that the final result gives no evidence of having been worked out under any than the most ideal conditions. It is, however, easy to imagine how serious it must have been to the mind of the

designer who had already been confronted with more than a just share of Among other things the difficulties. exigencies of the new general plan necessitated other locations for the elevators, with continuity of service during the change; a complete rearrangement of the heating, lighting and plumbing equipment during maintenance of continuous service: establishment of adequate entrances to the offices and bookstore during reconstruction of the main façade, and the protection of the tenants from any annoyance or inconvenience. With a clear understanding of the problem in all its many intricacies, the few features of the result which are open to criticism from an artistic point of view are more than

forgivable.

The Euclid Avenue façade is very successful in its proportions and detail. The spacing of the columns was predetermined by the existing steel columns, and of themselves would have been too far apart to have been dignified; but the device of the broad Corinthian-capped pilasters, engaging the columns of the same order, has enabled the designer to obtain an effect of narrower spacing that gives the sense of verticality necessary to the dignity of the façade. The very harsh mechanical sketch (page 513) does not give an adequate idea of the grace of line or well-studied detail that is so pleasing in the original. The Vincent Avenue façade is even more successful. It is of grey limestone throughout its height. and all of the mouldings, architraves, pilasters, cornices and belt courses have been kept in very low relief-a very intelligent bit of design, as it is entirely free from that heavy overpowering effect so general in façades on very narrow streets, such as the one in question.

On entering the main banking quarters from Euclid Avenue one passes through a vestibule into a transverse circulation, which leads to the arcade on the right and, on the left, to the stairway and elevator to the President's and Directors' suites on the floors above. To the right of the vestibule, on the main façade, is the women's room, panelled in satinwood and decorated in fine painted ornament, from which room a private stair leads



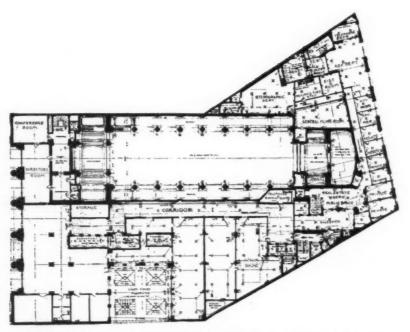
DETAIL OF EUCLID AVENUE FAÇADE—GUARDIAN SAVINGS AND TRUST COMPANY'S BUILDING, CLEVE-LAND, OHIO. WALKER & WEEKS, ARCHITECTS



PERSPECTIVE SKETCH FROM EUCLID AVENUE—GUAR-DIAN SAVINGS AND TRUST COMPANY'S BUILDING, CLEVELAND, OHIO. WALKER & WEEKS, ARCHITECTS.

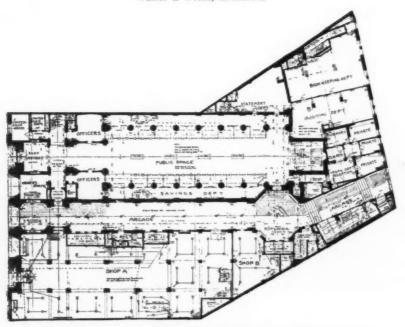


MAIN BANKING ROOM FROM EUCLID AVENUE ENTRANCE—GUARDIAN SAVINGS AND TRUST COMPANY'S BUILDING, CLEVELAND, OHIO. WALKER & WEEKS, ARCHITECTS.



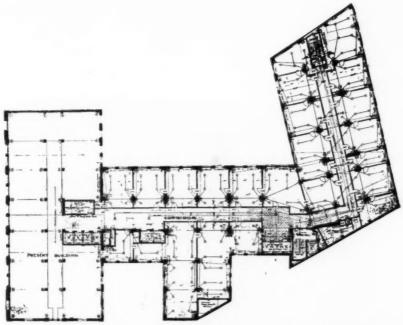
SECOND FLOOR AND BANK MEZZANINE—GUARDIAN SAVINGS AND TRUST COMPANY'S BUILDING, CLEVELAND, OHIO.

Walker & Weeks, Architects.

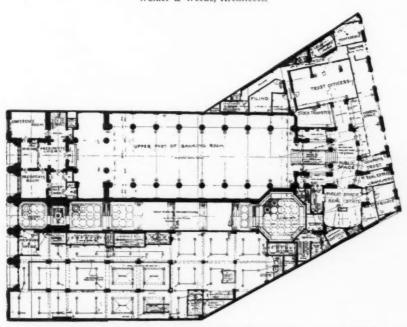


MAIN BANKING FLOOR-GUARDIAN SAVINGS AND TRUST COMPANY'S BUILDING, CLEVELAND, OHIO.

Walker & Weeks, Architects.



TYPICAL FLOOR PLAN-GUARDIAN SAVINGS AND TRUST COMPANY'S BUILDING, CLEVELAND, OHIO.
Walker & Weeks, Architects.



THIRD FLOOR (TRUST DEPARTMENT)—GUARDIAN SAVINGS AND TRUST COMPANY'S BUILDING, CLEVELAND, OHIO.

Walker & Weeks, Architects.

to dressing rooms and toilets in the basement; to the left of the vestibule is a consultation room. The transverse circulation or lobby is low-ceiled, and rightfully so I think, as it gives an added air of dignity and spaciousness to the main

proportioned, with a peristyle of Corinthian columns, and pilasters of the same order, the capitals of which set the pace for every bit of detail in the room. All of the detail, in line and form and relief and color, is in harmony with these

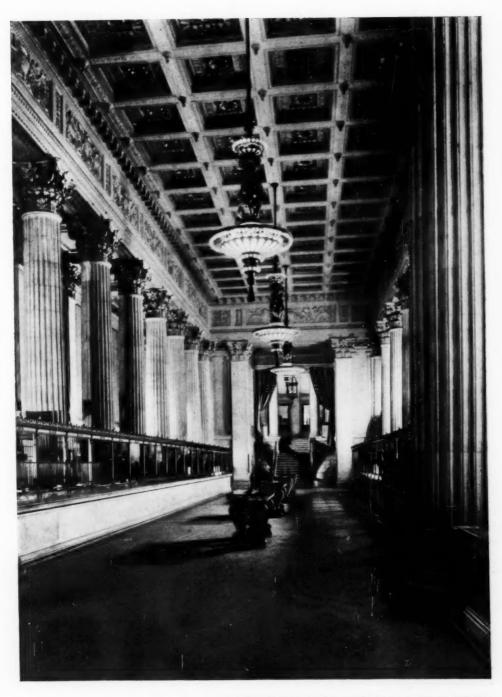


MAIN BANKING ROOM FROM MEZZANINE LEVEL-GUARDIAN SAVINGS AND TRUST COMPANY'S BUILDING, CLEVELAND, OHIO. Walker & Weeks, Architects.

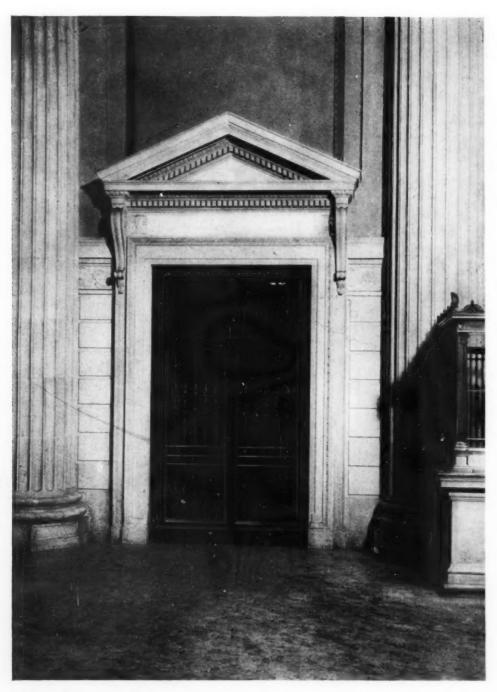
banking room that opens out to its full height immediately beyond. To the right and left before reaching the banking space proper are the officers' platforms, railed off by balustrades of Georgia marble. These occupy the rear bay of the old building, and are the full height of the main banking room—are in fact part of it.

The room is long and high and finely

capitals. The bronze screen of the wickets, a very delicate and chaste bit of design, has fortunately not been affected by the scale of the detail above, being treated as part of the furnishings and not as part of the architecture. The fact that these wickets hide the bases of the columns may or may not be open to criticism, but certainly they give to the banking space a greater degree of effi-



MAIN BANKING ROOM FROM VESTIBULE—GUARDIAN SAVINGS AND TRUST COMPANY'S BUILDING, CLEVELAND, OHIO. WALKER & WEEKS, ARCHITECTS.



DOORWAY IN MAIN BANKING ROOM-GUARDIAN SAVINGS AND TRUST COMPANY'S BUILDING, CLEVE-LAND, OHIO. WALKER & WEEKS, ARCHITECTS.

ciency than had they been sacrificed to some artistic effect. The columns to the necking, the check desks, the base of the screen, the pilasters and walls to eleven feet high are all of tooled Georgia marble; and the color effect thus obtained city are efficient only for a very limited time, if they can be made so at all. At the base of a high light-well they transmit very little light at best, and in the course of a very few months will have collected soot and dirt and refuse to the



DETAIL OF BANKING ROOM-GUARDIAN SAVINGS AND TRUST COMPANY'S BUILDING, CLEVELAND, OHIO.

Walker & Weeks, Architects.

is admirable—soft and warm and pleasing in the contrast of light and shade. The ornamental plaster of the ceiling is tinted to match the marble below and picked out in metallic colors which harmonize with the bronze of the screen and the lighting clusters.

The lighting is the most noteworthy feature of the room, being entirely artificial and yet deceiving the most careful observer. Skylights in a large and dirty

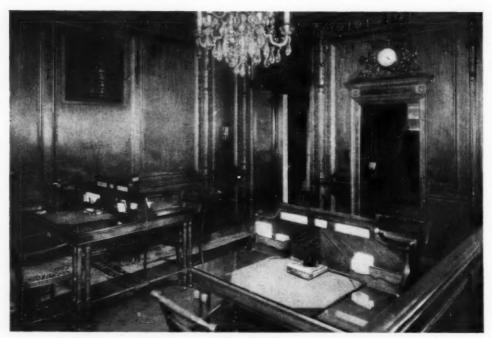
extent that they are worse than useless. Here, although the roof of the room forms the bottom of the light-court, the usually futile attempt to make use of natural light was very wisely abandoned, and a scheme of artificial lighting installed, which not only approximates natural light in color, but gives the entire room an evenly distributed flood of light that would be impossible to obtain with natural light. The major portion of the



STAIRWAY TO TRUST DEPARTMENT LOBBY FROM MAIN BANKING ROOM—GUARDIAN SAVINGS AND TRUST COMPANY'S BUILDING, CLEVELAND, OHIO. WALKER & WEEKS, ARCHITECTS.



TRUST DEPARTMENT LOBBY AT HEAD OF STAIR FROM MAIN BANKING ROOM—GUARDIAN SAVINGS AND TRUST COMPANY'S BUILDING, CLEVELAND, OHIO. WALKER & WEEKS, ARCHITECTS.



WOMEN'S ROOM-GUARDIAN SAVINGS AND TRUST COMPANY'S BUILDING, CLEVELAND, OHIO.

Walker & Weeks, Architects.

direct light is obtained by means of three large ceiling clusters in bronze and glass, very beautiful in design and workmanship. In all, it is the most effectively lighted banking room I have ever seen.

On the main axis at the rear of the banking room rises a monumental stair to the semi-circular public space of the Trust Department. The difference of level between Euclid and Vincent Avenues is such that, though the Trust Department floor is just a short easy flight above the banking room floor, it is a full story height above the shops on Vincent Avenue. At either side of the stair at the top is a free standing column, and between each of these and the pilaster at the wall is a marble parapet or balustrade, the top of which serves as a check desk, a very unique feature. The far wall, in which are four Trust Department wickets, is slightly curved, masking the turning of the axis at this point. The detail of both the stair, with its bronze railing, and the lobby is very refined and chaste, and the transition from the large scale of the banking room through the stair well to this lobby has been very skilfully handled. To the left is a small vestibule and beyond the Trust Officers' public space and conference rooms; to the right another small vestibule and the Real Estate Department. The salesmen's rooms and most of the working space of this department are on the floor above, reached by both stair and elevator from the lobby on the Trust Department floor.

At the front of the building, at the same level as the Trust Department, reached by a private stair and elevator, is the President's suite, comprising a lobby, a Secretary's platform railed off from the lobby, the President's private office, a small consultation room, a toilet and a large committee room. The President's office is panelled in walnut, and is very simple in detail and furnishing. From the lobby of this suite leads a balcony overlooking the main banking room and beyond to the stair and Trust Department lobby at the far end. Directly above this is the Directors' suite, similar

in plan and treatment. The plan and design of both of these suites was largely determined by the existing structure of the New England building. It was found necessary to retain the second floor framing construction at a level three feet be-

is the inner or Safe Deposit lobby, which forms the public circulation to the three vaults. Facing one on entering is the door to the main safe deposit vault and at either end are the small lobbies leading to the other vaults for silver and furs.



LOBBY OF PRESIDENT'S SUITE—GUARDIAN SAVINGS AND TRUST COMPANY'S BUILDING, CLEVELAND, OHIO.

Walker & Weeks, Architects.

low the Directors' suite floor level; hence, the low ceilings, doors and windows and the large beam in the President's lobby.

At the rear of the banking room, on either side of the stair leading to the Trust Department, is a flight descending to a low vaulted lobby in the basement. Directly ahead, as one descends the stairs, and screened off by a very beautiful grille in Benedict metal and color,

Here is one unit of the plan, treated as a unit, a small plan problem in itself, subordinate to the more important units on the floors above, but worked out with care and intelligence—just one more item of evidence that, though the artistic side has been well studied, the practical efficiency of the layout has been, as it should always be, the dominating factor.



GRILLE OF SAFE DEPOSIT DEPARTMENT—GUARDIAN SAVINGS AND TRUST COM-PANY'S BUILDING, CLEVELAND, OHIO. Walker & Weeks, Architects.

lobby, easily accessible and all intercommunicating; its own points of contact with the public; its own separate working space, and its own administration. At the same time all of these departments are connected by a circulation entirely separate from that of the public, by means of which money, papers and the bank personnel can pass from one department to another. This circulation is greatly assisted by a system of pneumatic tubes, working from a central, with outlets at all the wickets of each department.

Working out a plan to satisfy all of the requirements of the circulation chart is one of the most exacting phases of bank design. In the plan in question the architects have arrived at an admirable solution.

Of late we hear much of the "Art of Democracy" and progress toward a truly American Art; and whether or not we can see evidence of any such progress is open to a great deal of doubt. All agree that it is an aim worthy of the highest

effort; but in setting our minds and our hearts upon the coveted goal we must not close our vision to those works that may not, it is true, take us ahead, but surely are evidence that the high level of our architectural traditions is not on the retrograde.

In the Guardian Savings and Trust Company's new building, Messrs. Walker & Weeks have not created an artistic masterpiece in any sense of the word. It is neither a step toward the coveted "Art of Democracy," nor is it evidence of a new era in American architecture. And yet it is good architecture, better than ninety-nine per cent. of the other buildings being erected in Cleveland. It is graceful, dignified; fits well into its setting; is well-studied in detail. In color and proportion, it is extremely pleasing to the eye; and, above all, it fulfills to the highest degree of efficiency its mission as the home of a large, twentiethcentury banking and trust company. It is an admirable solution of a modern problem.

# English Architectural Decoration Text and Measured Drawings by Albert E. Bullock

Part XV. The Adam Period.

T has been truly said that without a knowledge of preceding work one cannot pretend to be inventive in architecture. Whether this emanated from Sir William Chambers or from Sir John Soane is of little moment; it was, however, a famous statement of the latter.

The work of the Brothers Adam was similar to that of John Wood of Bath, the architect of Buckland House, Berkshire, now the residence of Lady Fitzgerald; in addition, he executed many works in Bath and the surrounding

districts.

During the latter half of the eighteenth century, a number of eminent men were contemporary with the Adam school, of whom we should not lose sight in surveying the decorative work of the period. Thomas Chippendale, of the firm of Chippendale, Haig & Company, carried out a considerable amount of furniture and decoration in several different styles, including certain furniture to the designs of Adam for David Garrick in 1760, some of which was housed at his suburban residence at Hampton and the residue at his house No. 5 Adelphi Terrace, London. A story is told of Chippendale to the effect that he conceived the notion of arranging tea parties at his house as an incentive to the selling of his various examples of carved furniture. He hailed from Worcester and with his father, before 1727, settled at Conduit Street, having workshops at Long Acre.

The activities of Sir William Chambers included many temples in the gardens of Kew, in addition to Somerset House, London, and many another notable residence for the nobility of his time.

Abraham Swan flourished in 1758; while J. C. Kraft, W. Thomas and Robert Manwaring are among the joiners and decorators who vied with Sheraton and

Ince & Mayhew for the honors of competing in the cult of artistic expression in furniture, chimneypieces and other objects for interior use. With John Carter, Robert Wood, Nicholas Revett and James Stewart we have to deal with the school of antiquarian research, which produced the Greek revival under Sir John Soane and James Cockerell in the opening years of the nineteenth century.

Josiah Wedgwood stands apart as the epitome of all that is good in the design and execution of pottery and jasper ware, and whose style was developed by sculptors of the type of John Flaxman and

Chantrey.

In contemporary sculpture William Cheere and John Eckstein exhibit the prevailing characteristics, respectively, of the Chippendale and Adam schools of design, their method being more clearly discernable in the nature of the mural tablets and cenotaphs at Westminster

Abbey.

Instances of the influence of the Adam cult in varying degree of efficiency are to be found in many districts of England. Their authentic work includes Kedleston, Sion House, Nostell Priory, Lansdowne House; The Orangery, Bowood, Wiltshire; Harewood House, Yorkshire: Harewood House, London; Stratford House (now Derby House), and the Admiralty screen in Whitehall, London.

Isolated examples of Adam rooms in older mansions exist in many places, among which may be mentioned the library at Belton House, near Grantham, and the small drawing room at Forde Abbey; while the influence of their work is exemplified at Boodles Club, St. James's Street, London, as designed by John Crunden; the later work at Flaxley Abbey by J-Leck; the chinoiserie plaster work at Beacon House, Painswick,



THE CHAPEL, ZAVERIAN COLLEGE, BRIGHTON.

Shows Influence of Adam, Although Built Middle of Nineteenth Century by Sir Charles Barry.

Room Probably Decorated Towards End of Century, After Barry's Death.

Gloucestershire, and the typical decorations at Clayton House, Buckinghamshire.

Throughout the realm of furniture, silversmiths' work and the manufacture of chinaware the typical features of the Adam school prevails in a very definite and marked manner. The smallness of detail, its repetition and the reduced projection of the main cornice and subsidiary features are characteristics of the productions of this era, whether relating to external or internal work. The stone front to Eastgate House, Gloucester, is a pertinent subject, having motifs which suggest the possibility of the direct influence of John Wood or J. Leck.

The general effect of the authentic ornament accompanying the decorations of the Adam period is the attempt to give a definition to texture. The fine detail, with its repeating note of either fluting, beading or leaf enrichments, is noticeable in work existing at all the best houses treated during this era, the manner of which is very marked in the

ornament to the walls of the long gallery or library at Sion House.

The merit of the style of Robert Adam lies chiefly in the temerity with which he inaugurated an heretical cult in art at variance with former convention, which, although exhibiting pagan motifs, was adaptable to the successful treatment for interiors of modern residences.

His so-called "Etruscan taste," as executed for the Countess of Derby, is simply the style which he himself evolved from the material acquired during his travels and researches at Spalato in Dalmatia (a palace built by Diocletian in A. D. 304); his studies at Rome and his tours in the northern province of Etruria, which latter district became subject to Rome in B. C. 330 and was thereafter intermingled with the traditional character of Roman work. Early Etruscan work does not appear to have been so highly decorative as the more southern practice at Pompeii and Herculaneum. It was of a rather primitive nature

compared with Pompeiian examples, being largely confined to mural paintings within the tombs and some sculptured work and exceptionally good masonry.

The late Mr. Phené Spiers has pointed

out that certain tombs at Rome in the

combined with bas-reliefs and fine floral designs in stucco attached to the tufa backing.

In point of fact, the tombs of Rome and Pompeii must have provided the Adam Brothers and their colleagues with



OVERDOOR IN THE VICARAGE, HAMMERSMITH.

Via Appia recall early Etruscan types; but the detail was apparently more advanced in point of design and execution, as one example in the Via Latina indicates. This latter has a character much more in keeping with the general style of the usual Adam period, ceilings being worked in geometrical squares and circles much of the detail they subsequently incorporated into their peculiar style, in which, from a critical standpoint, one may readily trace the origin of many distinctive features.

The ornamented pilasters are obviously based upon the Raffaelian types existing in the galleries of the Vatican.



ADAM PERIOD STEEL GRATE. IN VICTORIA AND ALBERT MUSEUM.

Historically, the Adam Family are a very important link in the progress of English and Scottish architecture.

William Adam, the author of "Vitruvius Scoticus," was a renowned architect of Scotland, practising in the early years of the eighteenth century. If he was not actually an assistant of Sir William Bruce of Balcaskie, there is little doubt that he was largely influenced by the latter, as his designs show a refined and skilful handling with a chastity comparable with much later work. Had he never executed another edifice than Drum House, Gilmerton, this alone would suffice to merit his distinction. This building is described as "Sommervel House" in his monograph, being erected originally for James, the 13th Baron Somerville. There is an air of refinement about this residence almost equivalent to that which pervades the Petit Trianon at Versailles, where Marie Antoinette sought seclusion from the excitement of the French Court and the distractions of the later years of her troubled life

William Adam, however, made many additions to other mansions, including

Mellerstain, near Kelso, and Hopetoun House, a large building originally designed by Sir William Bruce.

The dining room of Yester House exhibits a fine sense of architectural knowledge similar to the English Georgian manner. As the house was incomplete upon the death of William Adam in 1748, some of the additions may be attributable to his son, Robert, who is known to have succeeded his father about 1760, and remodeled a portion of the facade in 1789.

Robert Adam was born in 1728 and commenced his travels in 1754; but he had an elder brother, John, who was doubtless his father's right hand when Robert was in his teens. John Adam remained in Scotland, succeeding to his father's business, being also the latter's sole executor. His practice does not appear to have been as extensive as that of his younger brothers. There is no record of his having traveled abroad; he was apparently content to remain where he was born and maintain his father's connections.

James Adam went traveling with

Clerisseau and Zucchi in 1760-62, visiting many of the haunts previously traversed by his elder brother. He returned to London in time to render assistance upon the reconstruction of the Duke of Northumberland's residence

ing never been executed. A stateliness and charm pervade the decorations of the interior; and although all the schemes were not realized, the majority are very successfully treated.

After the stately hall, the dining room

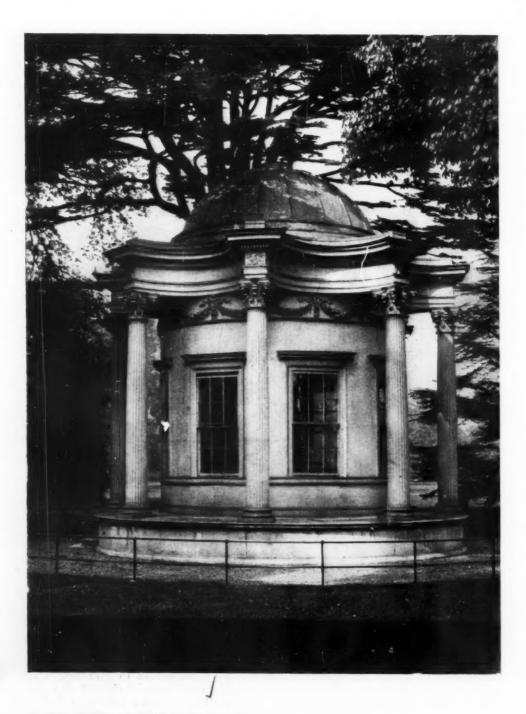


ADAM PERIOD SHOP FRONT, CORNHILL, LONDON.

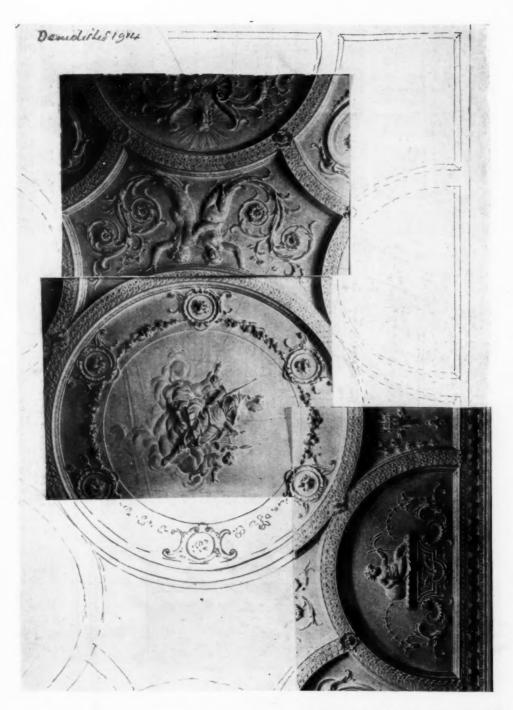
(Sion House, at Isleworth), by far the most famous of the Adams' productions.

The plan here given will be seen to be unique in several particulars. The long gallery or library has a width of only fourteen feet, at the back of which are the sleeping apartments of the Duke and his Duchess, facing the internal court, the hatched-in walls of the rotunda hav-

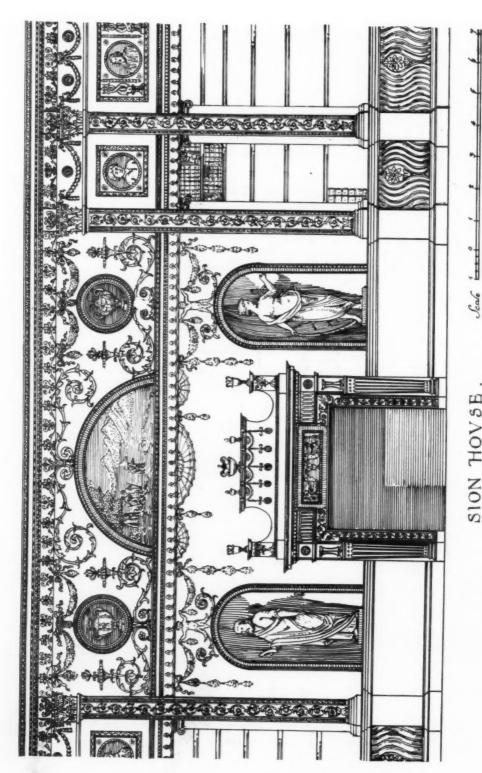
is as satisfactory an apartment as any, being plainer and freer from repeated ornament than the library, which is too harried with motifs to give repose of effect, a most essential element in all interior designing. In justice to Robert Adam it should be remarked that the walls of the long gallery were fixed to a width of which he did not approve and



TEMPLE OF THE SUN, KEW GARDENS. SIR WILLIAM CHAMBERS, ARCHITECT. ABOUT 1760. DESTROYED BY STORM IN 1916.

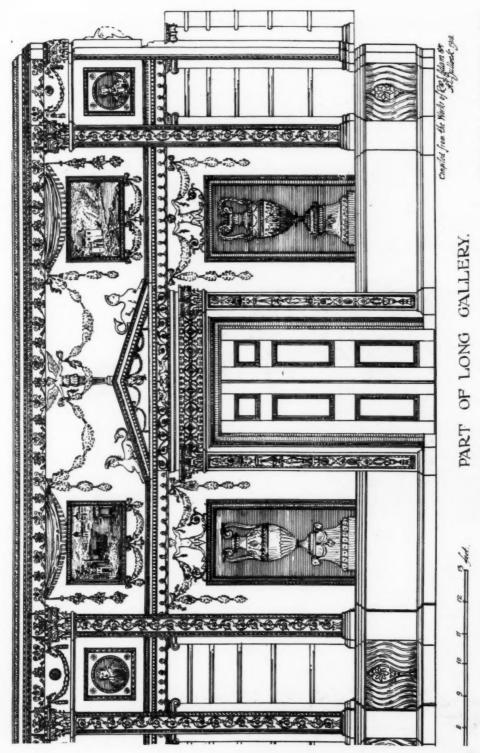


PORTIONS OF CEILING IN 9 ARGYLE PLACE, LONDON. DEMOLISHED IN 1914.



SION HOVSE

RIGHT PAGE. LEFT HALF OF DRAWING. HALF ON OPPOSITE

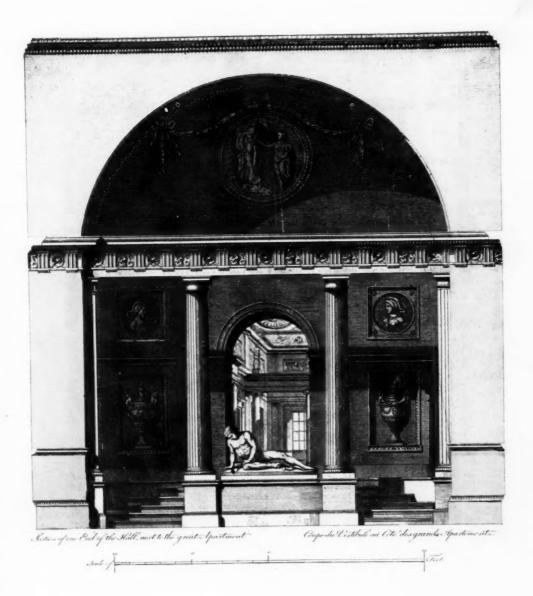


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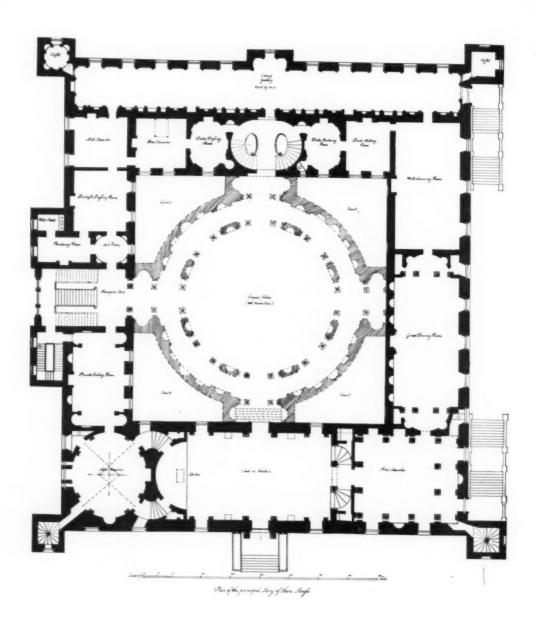


· hection of one I'nd of the Hall vart to the por cute Operation! Coupe de Vastilale un lote des Spademons, particulions

PRINT SHOWING ONE END OF THE HALL IN SION HOUSE.



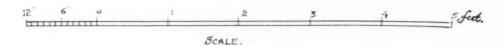
PRINT SHOWING ONE END OF THE HALL IN SION HOUSE.

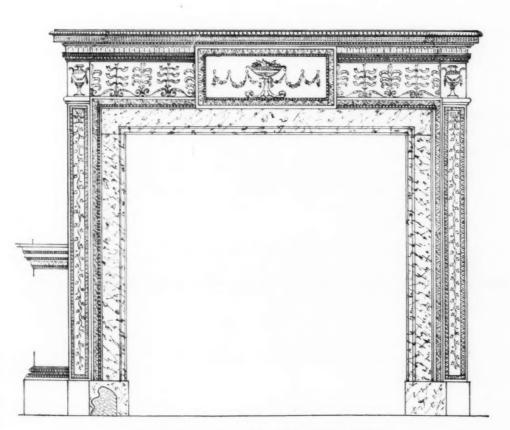


PLAN OF THE MAIN FLOOR OF SION HOUSE, ISLEWORTH.

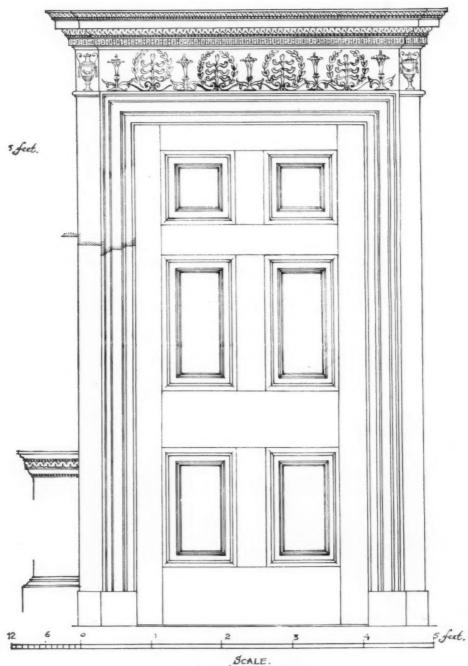
# FLAXLEY ABBEY.

DECORATIONS
J. LECK c 1784
(ADAM PERIOD.)



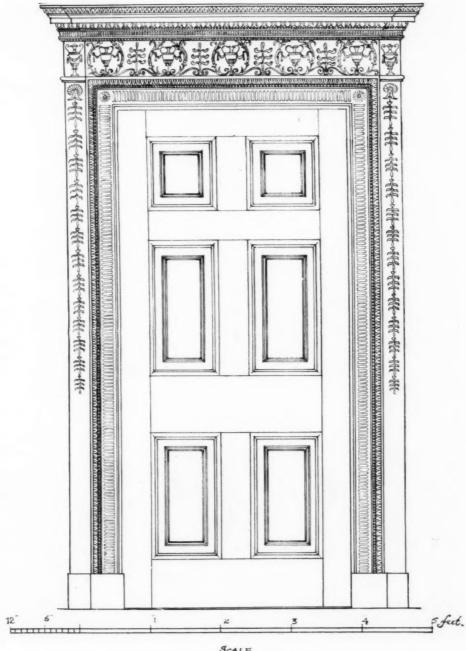


DRAWING ROOM CHIMNEY PIECE.



DINING ROOM DOOR.

FLAXLEY ABBEY, GLOUCESTER. DECORATIONS BY J. LECK, ABOUT 1784.



Scale.

DRAWING ROOM DOOR.

FLAXLEY ABBEY, GLOUCESTER. DECORATIONS BY J. LECK, ABOUT 1784.



THE HALL-FLAXLEY ABBEY, GLOUCESTER.

the ceiling of a height which limited his sphere of operations. The great length of one hundred and thirty feet by a narrow width naturally called for a treatment of pilasters which would break up the horizontal perspective of converging lines that would otherwise be inevitable.

The screen on the Brentford Road is a fine composition, of a trifle less solid nature than what he designed for the

Admiralty at Whitehall.

The library at Ken Wood, Hampstead, for the Earl of Mansfield, has a barrel vaulted or concave ceiling with semicircular end screened off by a trabeated columnar treatment. The effect of this is to keep the continuous bookcases at one end, leaving freedom in the center for the disposition of furniture and wall space for pictures. The usual oppressive feeling of the stuffy, over-volumed

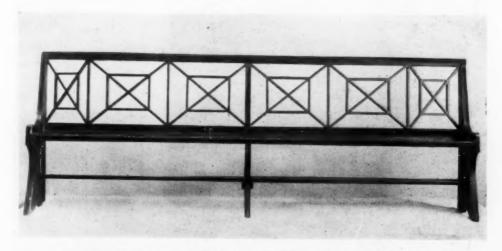
library is largely absent in this instance.

At Belton the cases project into the room at intervals, leaving little space for furniture, giving the effect of a public library rather than the reception room in a private house where study can be indulged in at leisure.

Antonio Zucchi executed some of the paintings at Ken Wood, for which his account exists; while Thomas Chippendale and his son provided silvered French plate glass for certain definite purposes,

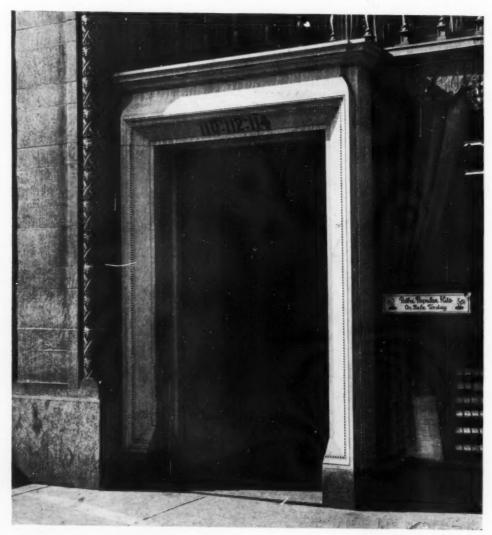
and doubtless some furniture.

At Bowood, for Lord Lansdowne, Robert Adam remodelled the dining room and built the Orangery, which contains also a library and breakfast room; the whole placed on a balustraded terrace with formal garden in front, which latter was probably laid out when Sir Charles Barry made his additions in the middle of the nineteenth century.



CHIPPENDALE PERIOD BENCH. IN VICTORIA AND ALBERT MUSEUM.

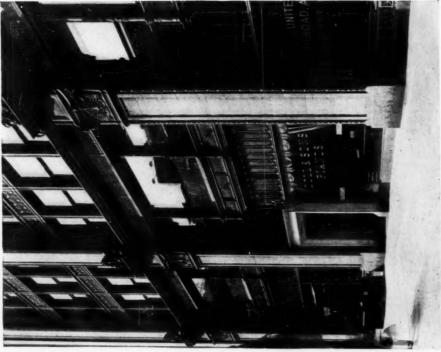




JACOB DOLL & SONS' BUILDING, NEW YORK CITY. ALFRED C. BOSSOM, ARCHITECT.



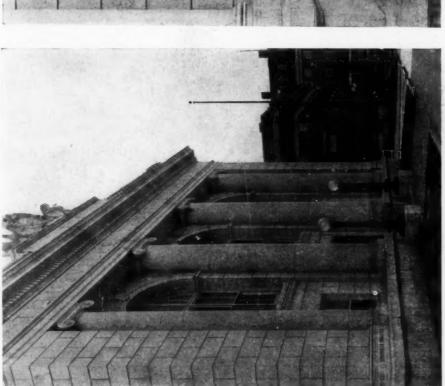
JACOB DOLL & SONS' BUILDING, NEW YORK CITY.
Alfred C. Bossom, Architect.



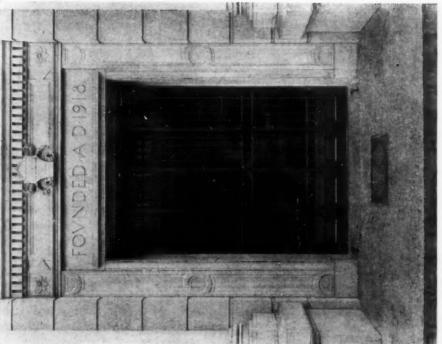
JACOB DOLL & SONS' BUILDING, NEW YORK CITY.
Alfred C. Bossom, Architect.



TITUSVILLE TRUST COMPANY'S BUILDING, TITUSVILLE, PA. ALFRED C. BOSSOM, ARCHITECT.



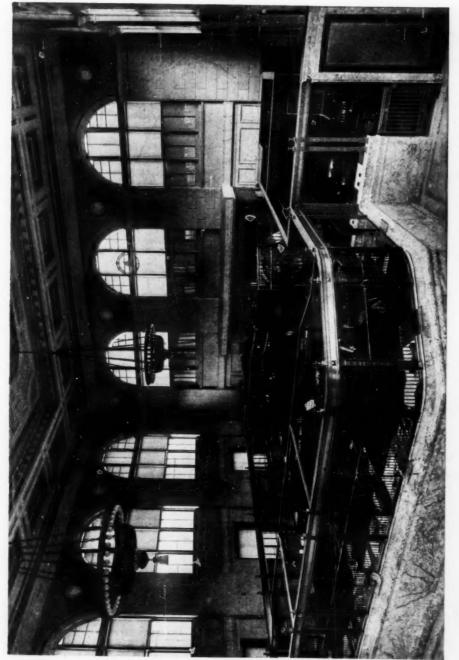
TITUSVILLE TRUST COMPANY'S BUILDING, TITUSVILLE, PA. Alfred C. Bossom, Architect.



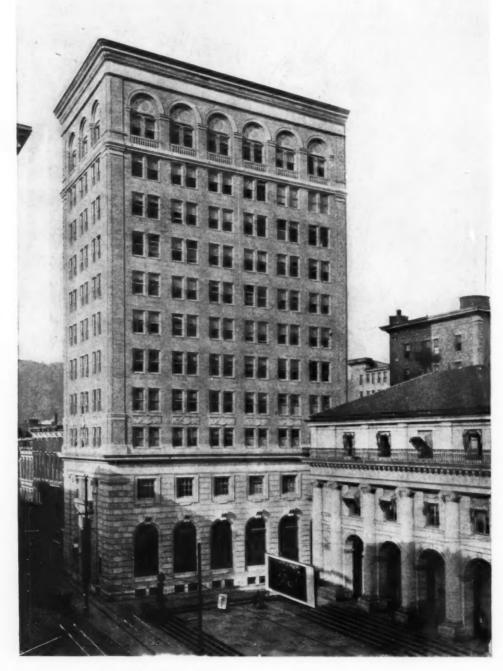
TITUSVILLE TRUST COMPANY'S BUILDING, TITUSVILLE, PA. Alfred C. Bossom, Architect.



TITUSVILLE TRUST COMPANY'S BUILDING, TITUSVILLE, PA. ALFRED C. BOSSOM, ARCHITECT.



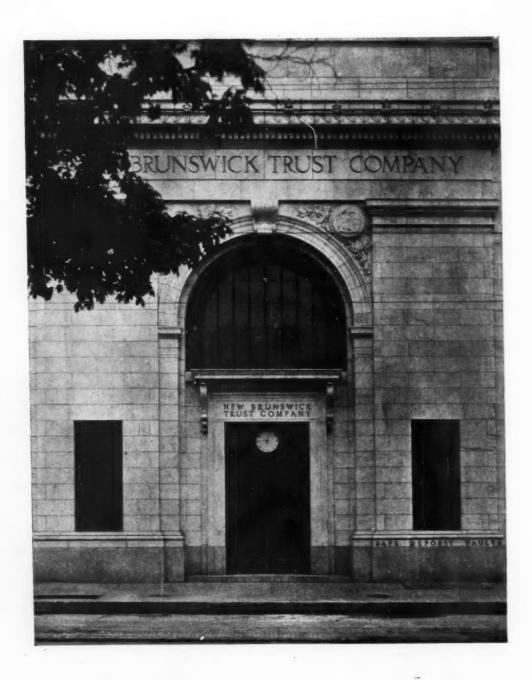
TITUSVILLE TRUST COMPANY'S BUILDING, TITUS. VILLE, PA. ALFRED C. BOSSOM, ARCHITECT.



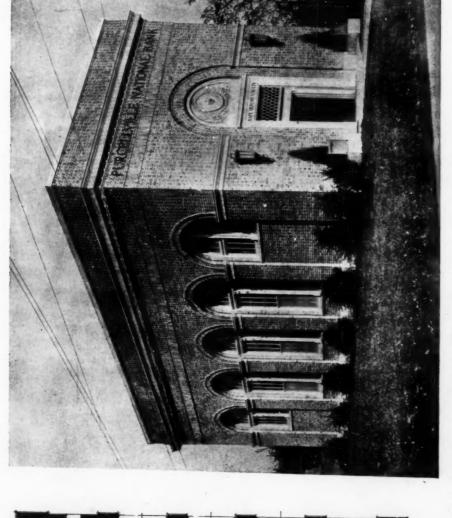
KANAWHA BANKING AND TRUST COM-PANY'S BUILDING, CHARLESTON, W. VA. DENNISON & HIRONS, ARCHITECTS.



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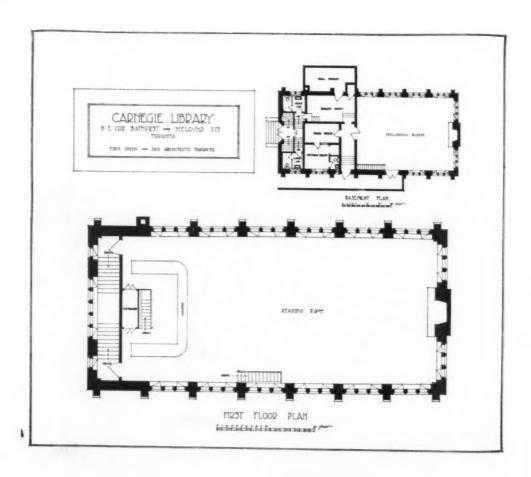
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Planning the Farmhouse.

In November and December, 1919, I conducted, through The Farm Journal, a prize contest for "The Farmhouse I'd Like to Have." This was strictly limited to actual

farm folk—chiefly farmers' wives and daughters. Rough sketch plans (no elevations) were required. From a circulation of one million, pretty evenly spread over the United States, we got 3600 contestants. The great majority of the plans were remarkably well worked out, and followed certain definite lines. I know now, beyond all question, what the program is for designing a real farmhouse; and I'll try to state that program. Naturally, particular local conditions will alter it somewhat; but here are the general requirements.

To illustrate, I'll take one of the prizewinning plans, sent in by a Nebraska woman. It will fit almost any other section equally well. The sketches showed a semibungalow; the second floor plan was not especially interesting, so I will not reproduce it. The first floor, however (Figure 1), covers nearly every needed feature; it would serve equally well in a two-story scheme, and the dotted portions show how a straight bungalow may be developed.

1. The kitchen is the most important room in the house. It must be well lighted, well ventilated, and of an average size of about twelve feet by fifteen. The family eat breakfast here; other meals are usually (but not always) served in the dining room. The sink should be directly under a window; the drain-board is frequently expanded into a work-table, and set at a height of three feet two inches, or thereabouts. Maple flooring seems to be the favorite for the kitchen, although magnesite or other plastic floorings, with integral cove base, are beginning to appear.

The dumb-waiter is universal. Because

of the ice problem, a farm refrigerator is often out of commission; so perishable foodstuffs are put in the dumb-waiter, and lowered down to the cool cellar. Sometimes a shallow well is dug in the cellar floor, so that the whole affair can be kept still cooler. The dumb-waiter also serves to lift fuel, winter vegetables, etc.

Elaborate cupboards and kitchen cabinets are in great demand; indeed, probably fifty per cent. of the farm women do not want a pantry, preferring to keep all their groceries and supplies right at hand, in the cabinets. The other fifty per cent. want the pantry, but merely as a reserve magazine.

The little "breakfast alcove," with two settles and a fixed table, is very popular, but not universal.

A fuel box near the stove, arranged to be filled from outside or from the cellar, is called for by hundreds of farm women, and many of them say: "I want my kitchen set where I can get a view of the road, and see what's going on, as I stand washing dishes or making mince pies."

2. Next in importance comes the dining room. It must be big enough for "threshing dinners" (though on a very large farm, a second table would be set in the living room). The size depends entirely on the probable number of men that must be taken care of; a dairy farm will not need so large a room as a wheat farm, for instance.

The buffet should always be built-in; and usually it should be placed as I've shown, with glass doors on the dining room side, and panel doors in the kitchen. Food, dishes, etc., are placed on the shelves in one room, and taken off from the other; anything that will save steps and save labor is eagerly welcomed by the farmer's wife.

The dining room is also the general sitting room of the farm family; so bookcases, boxed window seats to hold work, toys, magazines, etc., bay-windows for flowers and so on, are very desirable, although not all of these features are shown on this

particular plan.

Hardwood finish and hardwood floors are wanted here; never make the mistake of suggesting white-painted woodwork to a farmer's wife. "Do you want me to spend an hour every day, washing the paintwork clean, after the men-folks have messed it up?" she'll ask. We are too apt to forget that farmwork is particularly dirty and that from two to twenty-five workmen, in their working clothes, invade the farmhouse at least three times a day.

3. The living room is somewhat smaller than the dining room; it's more of a "company room," though it is actively used nowadays, and not shut up like the old-time "parlor." In most cases, the front door opens directly into this living room; the reception hall is very seldom wanted west of Ohio. In the East, perhaps fifty per cent. of the plans show this arrangement. As a matter of fact, a reception hall is very little used in a farmhouse; the family always enter and leave from the back of the house, because that is nearest the barns, fields, and chicken-houses. "Neighbors always drive up to the rear of the house, because that's where I'm usually to be found," says one farm woman.

4. The stairway is almost always at the back of the house, convenient to the kitchen, etc. Hired men can come in and go directly up to their rooms. This particular plan is not quite typical, in that it does not show a main stair with "grade door," which is by far the most popular sort.

5. The wash room (or some substitute) is absolutely vital. Practically every plan showed it, in some form. "The men come from work, and go right into the wash room, from the porch; they take off their muddy rubbers, shed their wet and smelly old coats, and wash up. Then, by way of



Fig. 2.—A very popular and convenient first-floor layout. The bay-window is wanted to hold winter flowers, provided it has a sunny exposure. The grade entrance to the stairway is an extremely good feature.



Fig. 1.—First Floor Plan of a prize-winning semibungalow from *The Farm Journal* Farmhouse Contest. The Second Floor had three Bedrooms, Sleeping Porch, Sewing Room (or Bath) and storage space. The dotted portion shows how a pure bungalow could be developed.—Courtesy of *The Farm Journal*.

the hall, they pass right to the dining room without going through my kitchen." So says one woman; and her sisters all agree. The idea is that men track dirt into the kitchen; worse still, they invariably get on a flustered woman's nerves, when she's

hurrying to serve a meal.

Sometimes the washroom is so placed that a porch connects it with the dining room; or the wash room is in the basement. This is particularly desirable where hard winters prevail; the men enter the grade door, go directly down, and leave their wet and snow-covered wraps to dry, around the furnace. Then, coming upstairs, they go to the dining room, or to their own rooms, especially the hired men. I think that the average grain farmer would be much interseted in metal lockers, industrial showerbaths, ranges of lavatories, etc.

6. The downstairs bathroom occurs in seventy-five per cent. of the plans, at least—often to the exclusion of any other bath. One reason is, the farm water pressure is frequently too low to supply any upstairs fixtures; indeed, there may be no power pressure at all, but just a hand pump in the kitchen. But a still more cogent reason exists: the farm woman spends at least three-fourths of her time in or near the kitchen; and she wants a toilet close at hand, not only for her own use, but for the small children. A lavatory, with toilet, may

answer to some extent; but not altogether. The baby must be bathed, the children's bath supervised, and, at the same time, the

cooking must be watched.

7. There is nearly always at least one downstairs bedroom, no matter what the type of farmhouse. "When Johnny's sick in bed in green-apple time, I don't want to be trotting up and down stairs, whenever he wants a drink of water." When Johnny gets well, the room will probably serve as a farm office; or maybe as a sewing room.

8. A large screened back porch, at least ten feet wide, is very necessary indeed; meals are often served on it, and almost all the kitchen work, etc., done out here, in the cool. Quite often this porch is weatherboarded up about three feet; in winter time, the open spaces are glazed with temporary sash. This porch may or may

not have a concrete floor.

9. An ample front porch, set so as to catch the breeze, goes without saying. A concrete floor is probably the favorite. Screening is not necessary, except in mosquito neighborhoods; since (as sometimes happens) this front porch is used for sleeping.

10. Upstairs, several good bedrooms are needed, depending on the size of the family and the number of farmhands. Very large closets (preferably with windows) are

wanted.

11. A sleeping porch may or may not be required; but at any rate there must be an upstairs balcony, for shaking rugs, airing bedding, and so on.

12. Ample storage space sometimes for

seed-corn, etc., is necessary.

13. The basement always has a heater room; also a large room, shut off from the heat by solid partitions, where apples, potatoes, and other perishable crops may be

kept, free from frost, yet not too warm. Often these are commercial crops, intended for sale, not merely the family's supply. A laundry room, too, is usually down here, all fitted with the latest equipment of electric washing machines, and so on. Sometimes there is drying-space here, for stormy weather; often, however, the dumb-waiter runs up to the attic, where a store room serves as drying-room at need. And finally, an engine room, workshop, etc., is almost always located in the basement.

I believe this completes the ordinary inventory, but there are a lot of reservations. For example, a small office, distinct from the downstairs bedroom, is growing in favor.

A very small sewing-room, near the kitchen, is suggested by several women; the idea is, that an eye can be kept on the cooking, and every spare moment utilized.

Instead of being in the basement, the laundry very often adjoined the kitchen or the back porch; it is large enough to hold separator, feed-cookers (for heating hog-feed, etc., in winter), men's washing equipment, lard boilers, butcher tables, scalding kettles, and so on. Sometimes this laundry is in a separate building.

Where possible, the garage is in the base-

ment

A small greenhouse is sometimes built on, and heated from the cellar; it is used to

start early vegetables, etc.

The type of house varies in different sections. A semi-bungalow, or a square two-story affair, seems to be the choice in the Middle West; the Eastern farmer rather prefers a colonial two-story scheme; the South is a general jumble; the Far West is all for bungalows. Indeed, the straight-out bungalow is very popular everywhere.

WILLIAM DRAPER BRINCKLOE.



Fig. 3.—Another satisfactory solution. The laundry serves as a wash-room for the men, and may possibly have a shower-bath and frost-proof hopper in it. All sorts of miscellaneous work, like lard-rendering, poultry-dressing, etc., is done here.



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Frank H. Smith, Inc. Eng.

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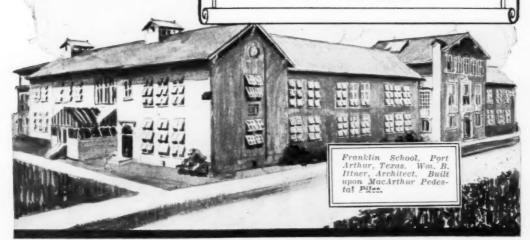
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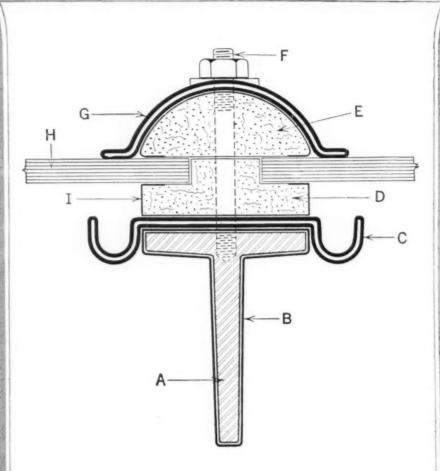
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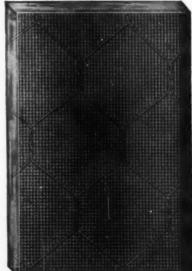
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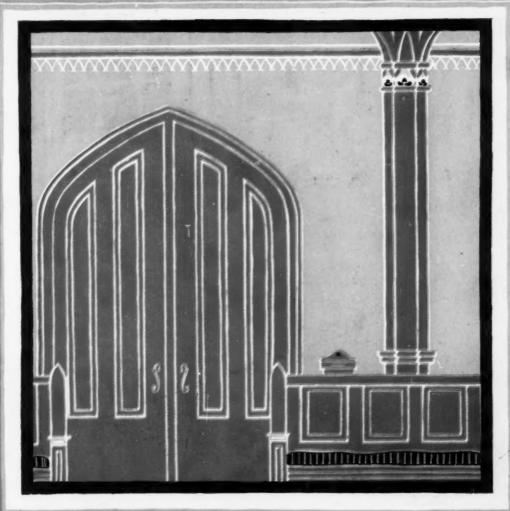
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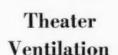
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Play-proof, piano-like elegance for floors—the rich floor finish that contributes so immeasurably to good architecture and furnishings. Heel-proof! Water-proof!

Specify Pitcairn Floor Spar and you will be glad of st.

PITCAIRN VARNISH COMPANY MILWAUKEE

PITTSBURGH PLATE GLASS COMPANY Determinent States on all leading color; on the United States



EVEN with the scorching heat curling up the pavement on the outside the theater can be cool and comfortable inside through proper air conditioning.

This same system of theater air conditioning insures just the right temperature at all seasons of the year, summer or winter and is accomplished through the use of Sirocco Air conditioning apparatus.

The great interest in theater construction of all kinds makes the subject of ventilation of greater importance than ever.

Our book on theater ventilation shows many pictures and gives a new angle to the subject. We will send a copy on request.

American Blower Company
Detroit, Mich.

TRADE MARK

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# Effective Dependable Ventilation

cannot be secured by haphazard, happen-chance methods. "A hole in the roof is not ventilation." The Swartwout Ventilator is an actual ventilating machine which actively **compels** the flow of air.

Not only does this ventilator handle more air than the Stationary ventilator, but in actual tests by users, side by side with power-operated exhaust systems, a battery of Swartwouts has handled the larger volume of air at far less first cost and no expense for operation.

"The Gospel of Fresh Air" offers valuable ald to the architect in supplying aid to the architect in supplying him with ventilation facts and specifications. Free on request,

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The OHIO BODY & BLOWER CO.







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A timely talk of interest to all users of structural wood



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Within a century, our forests have been reduced from 850,000,000 acres We are consuming lumber at a greater rate than ever before. Replanting is a matter of years, while our vital need is to protect our present supply. Conservation and pre-servation must join hands—you must do your share by preserving from decay every stick of lumber that you use.

Carbosota is a wood preservative that every lumber buyer, large or small, can employ with profit. Its application is simple, and it has the effect of greatly prolonging the life of wood at a cost far below that of replacing it after it has decayed.



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On the Railroad

Reprinted from Lumber World Review, March 25, 1920 Line

#### "A Valuable Opinion on 'Forest Devastation' from Henry S. Graves, Former Forester

"We recently received a letter from Henry Solon Graves, now a forestee of the United States forest Service, Department of Agriculture, Washington, D. C., which we consider altogether the most substantial statement. Mr. Graves has ever made on he subject of forest devastation, there it is.

Here it is:

"We must take our choice between stopping forest devastation
and lessening prosperity. Do we want to
sink to the condition of the European
countries, where scarcity and high cost of
wood handizing industry and human comfort? We must decide now.....

The Farmer

and County Agent

to save money by wood preser For Poles and Cross, Out annual bill for selephone, tel

user of wood.

the lumber. For larger work, where suitable equipment is obtainable, the Open Tank process, which consists in the immersion of the lumber in hot and cold baths of Carbosota is naturally more effective, although more costly.



Decayed piling and shoothing on fresh water lake.

#### Summer Resorts

of interior labores as well as sea-shore placements as well as sea-

The rise in lumber prices has hit the farmer as well as every other user. If he buys lumber it costs nearly double what it did. If he cuts his lumber from the wood-lot, the increased value of his own or hired labor has boosted the cost until it is just as essential for him to prolong the life of his own lumber as for any, other user of wood. Your Clients are Reading Usually the county agricul agent will gladly show the farmer

> THIS announcement appearing in the May 29th issue of the Saturday Evening Post which is

further familiarizing them with the value of Barrett Carbosota as a wood preservative.

If desired we will gladly furnish you with standard specifications for the non-pressure treatment of all structural timbers with Carbosota Creosote Oil.

#### What is Carbosota?

Carbosota Creosote Oil is a highly refined and specially processed Coal-tar Creosote, particularly adapted to Surface treatments (brush treatment or painting, spraying and dipping), and the Open Tank process. It conforms to standard specifications.



The Bassett Company

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This delightful house is finished throughout in RED GUM ("AMERICA'S FINEST CABINET WOOD").

The second floor is finished in white enamel on Gum (which in the whole world of wood has no equal for this purpose).

RED GUM veneer-built doors are wonderfully beautiful, as remarkable figuring is easily obtainable.

RED GUM should be finished so as to bring out its own charm of color. It is absurd to destroy this in an attempt to imitate other woods less worthy for choice cabinet purposes.

In natural finish RED GUM does not show finger-marks and is easily kept clean.

Let us send you our booklets, samples and a list of hundreds of fine residences, hotels, banks and office buildings with Red Gum trim and doors. Thus you can get an idea of the prestige of this wonderfully beautiful native cabinet wood, and see how it would enhance the grace of your own home. Write us freely.

ADDRESS: RED GUM DIVISION

#### American Hardwood Manufacturers Association

1303 Bank of Commerce Bldg., Memphis, Tennessee



IN all construction work it is important that cracks and crevices be eliminated to insure moisture, dust and cold proof interiors. This is what Pecora Compound is guaranteed to do permanently by closing them with a tough, non-shrinking outer surface which remains in its soft pli-

able condition on the under surface.

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The use of this Compound will prove of great economic value by saving from 20 to 50% in fuel. It does not deteriorate with age and defies the action of the elements. It never dries or cracks. It will successfully adhere to stone, concrete, terra cotta, glass, iron and steel.

> Write for information or see SWEET'S

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A FTER last winter's terrible experience, nearly everybody wants a better heating system.

After paying last winter's coal bills (with the prospect of very much higher prices next winter), everybody wants the heating system that consumes least fuel.

# The Monitor Bi-Loop Modulated Hot Water Heating System

(Patented)

#### Gives Most Heat At Least Fuel-Cost

It combines all advantages claimed for steam, hot water, vapor, vacuum or hot air, and it is more simply operated. It possesses vital features of efficiency and economy which are patented and found in the Bi-Loop System alone.

It is 100% efficient in buildings of any type, height or size. Ask any owner-write for list.

### When the Customer Won't Pay More Than the Cost of a One-Pipe System

#### Specify The Monitor Bi-Loop One-Pipe Hot Water Heating Job

Piping same as for one-pipe steam. Steam enters radiator at bottom of Bi-Loop section, passes up Bi-Loop section (causing water to circulate within the radiator), and across top of radiator, coming in direct contact with water. Air released through air valve or small air line.

Many of the strongest Bi-Loop boosters have been using one pipe Bi-Loop for five or six years. For instance—

The following was written after that "Coldest Winter" of 1917-18:

"I had the No. 9 Monitor Boiler and Bi-Loop Hot Water Radiators installed in my property at 932 W. College Avenue, Philadelphia, in August, 1913. During the past five winters the system has heated my entire house satisfactorily, with comparatively small consumption of coal."

(Signed)

Charles Winter.

This is a one-pipe job.

"Satisfactory Heat in Coldest Weather"—"Small Consumption of Coal"

Just About PERFECT Service.

AND

Radiators that hold the heat hours after steam is shut off.

Water heated in the radiator by very low-pressure steam,

All the water in the radiators—none in the pipes.

Each radiator a separate circulating unit—2 minutes after steam enters Bi-Loop section circulation begins—15 minutes and radiator is hot all over.

Air-removal problem practically eliminated without pumps or any other mechanical device—radiator 95 per cent. filled with water.

Hot Water automatically circulating in

each radiator separately, giving 100% efficiency.

A defective steam system changed into a perfect hot water system by substituting Bi-Loop Radiators for the old steam radiators.

Bi-Loop Radiators applicable to any make of steam boiler.

Hours of open-draught firing saved.

Temperature, suited to mild days of Spring and Fall or to 30° below zero, obtainable at will.

30% less radiating surface than for any other hot water system.

And so on-advantages galore.

Turn to Pages 1148-1153 in "Sweet's", and Study Them. Write for "Good-bye Heating Troubles" (5th edition). Monitor Bi-Loop Radiator Co., Lancaster, Pa.

# A DIRECTORY FOR ARCHITECTURAL SPECIFICATIONS—Continued.

Kohler Company.
Maddock's Sons Co., Thomas.
Newman Manufacturing Company.
Penberthy Injector Company.
Speakman Company.
Trageser, John, Steam Copper Works.
Victor Brass Manufacturing Company.

Preservatives-Wood.
Barrett Company, The.

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Aeroshade Company.

Caskey-Dupree Mfg. Co.

Hough Shade Corporation.

Pumps.

Bishop-Babcock Company.

Deming Company.

Radiators.
American Radiator Company.
Monitor Bi-Loop Radiator Company.
Smith Company, H. B., The.

Railings.

Anchor Post Iron Works.

Newman Manufacturing Company.

Wickwire Spencer Steel Corporation.

Refrigerators.
Lorillard Refrigerator Company.
McCray Refrigerator Company, The.
Roof Cement.

Roof Cement.

Barrett Company, The.
Hetzel, J. G., Estate of.
Johns-Manville Company, H. W.

Johns-Manville Company, Mr. L.
Barrell Company, Wm. L.
Barrelt Company, The.
Berger Manufacturing Company.
Bird & Son, Incorporated.
Boyle, John, & Company, Incorporated,
Carey Manufacturing Company, Philip.
Johns-Manville Company, H. W.
Merchant & Evans Company.
Stark Rolling Mill Company.

Sta-So Milling Company. Truscon Steel Company. Vortex Manufacturing Company.

Roofing Slates. See "Slates-Roofing."

Roofing Tin.

American Sheet & Tin Plate Company.
Berger Manufacturing Company.
Merchant & Evans Company.
Stark Rolling Mill Company.
Taylor Company, N. & G.

Sash and Frame-Window. See "Windows."

Sash Cord. Samson Cordage Works.

Sash Chain. See "Chain Sash."

Sash Pulleys.
Columbian Hardware Division.
Russell & Erwin Manufacturing Company.
Schools.
Pennsylvania Academy of Fine Arts.

Sheathing Papers.

Barrett Company, The.
Bird & Son, Incorporated.
Johns-Manville Company, H. W.

Shingle Stains.
Cabot, Incorporated, Samuel.
Creo-Dipt Company.
Devoe & Raynolds Company.
Parker-Preston Company.

Shingles.

Barrett Company, The.
Bird & Son, Incorporated.
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Edwards Manufacturing Company.
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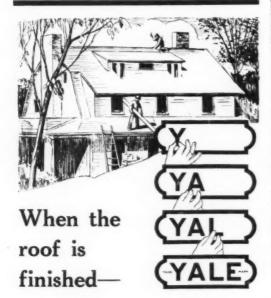
This exhibit, promoted by the National Association of Decorative Arts and Industries, is a worthy effort to bring those interested in making artistic homes in touch with those whose products are admirably adapted for such purposes.

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Slate Blackboards. Knickerbocker Slate Corporation.

Slate Roofing.

Auld & Conger Company.

Knickerbocker Slate Corporation.

Rising & Nelson Slate Company.

Sheldon Slate Company, F. C.

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Sound Deadeners.

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Bird & Son, Incorporated,
Cabot, Incorporated, Samuel.
Johns-Manville Company, H. W.

Stains. See "Paints."

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Hollow Building Tile Association.

Tile Roofing.

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at the threshold

HE "first impression" created by an artistic suggestion like the one shown here, wherein Tiles are used just outside the door with excellent effect, is one that will form an agreeable introduction for the rest of the house.

Tiles have a place in so many parts of the home that architects may well consider them indispensable for both their practical and their decorative values.

The Associated
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Furnished with patented tread pan with sanitary cove to receive asphalt, cement or composition tread finish. designed to receive marble, slate or safety treads.

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#### A DIRECTORY FOR ARCHITECTURAL SPECIFICATIONS—Continued.

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Berry Brothers.
Boston Varnish Company.
Devoe & Raynolds Company.
Murphy Varnish Co.
Pitcairn Varnish Company.
Smith & Company, Edward.
Vortex Manufacturing Co.
U. S. Gutta Percha Paint Co.

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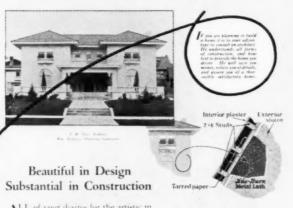
### Wire Lath. Wickwire-Spencer Steel Corp.

Wire Rope.
American Steel & Wire Company.

Wood Preservatives.
Barrett Company, The.

#### Woods.

American Oak Manufacturers' Association.
American Walnut Manufacturers' Association.
Arkansas Soft Pine Bureau.
Astoria Mahogany Company, Inc.
Birch Manufacturers' Association.
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California Redwood Association.
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And since you build not only for foday, but for ten, twenty, thirty or more years from now, durability is as important, if not more so, than beauty. Build, therefore, of a substantial construction—specify metal lath for the base for your stucco.

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as a base for stucco is also a reinforcement—fre-reasting and lasting. The small diamond shape meshes grip the stucco firmly and hold it securely.

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INDIANA



# The importance of sound trees in the architectural composition

"The house is only one unit among many in the design, even though it is usually the dominant unit. And in the choice of its form, the architect should consider the whole composition of which the house forms a part, which includes, also, the trees around it, the approaches, the slope of the ground on which it is set."—From "An Introduction to the Study of Landscape Design."

All architects who plan a dwelling or an artistic composition of any kind take into consideration the existing trees. But too often little thought is given to the condition of these trees. At a casual glance they may appear vigorous today—but will they endure tomorrow? Would the whole effect be marred if certain important trees were neglected and lost?

Many architects now recommend that Davey Tree Surgeons be consulted before plans are finally drawn. These skilled Tree Surgeons in co-operation with the architect examine every tree and prescribe and carry out the necessary treatment to insure long-continued life. Hidden weaknesses and diseases are discovered — apparently healthy trees are often found weakened in structure, and subject to destruction by any violent wind.

Davey Tree Surgeons have satisfied the most exacting clientele in America. Among prominent persons and places they have served are:

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THE DAVEY TREE EXPERT CO., Inc., 206 Elm St., Kent, Ohio. Branch Offices with telephone connections: New York City, Astor Court Bldg.; Chicago, Westminster Bldg.; Philadelphia, Land Title Bldg.; and Boston. Write nearest office

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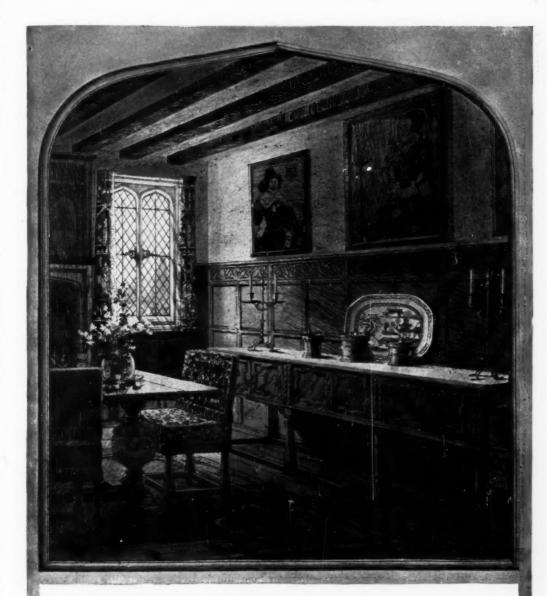
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THE secret of the enduring charm of each Hampton interior lies not only in beauty of color and carving, nor even in the discriminating skill of the Hampton decorators in selecting and arranging fine pieces of cabinet work with harmonious fabrics and backgrounds, but in the subtle details of lighting and those unusual incidentals which make each room as delight-

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# Nampton Shops 18 Case 50th Serrer

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"I have always been of the opinion that the kitchen and pantry should not be neglected so far as beauty and comfort are concerned," replied the hostess. "All the woodwork you see here is North Carolina Pine. Our architect recommended it because of its beauty of grain and ability to take stains and enamels. Moreover, it is low in cost and will last as long as the most expensive hardwood."

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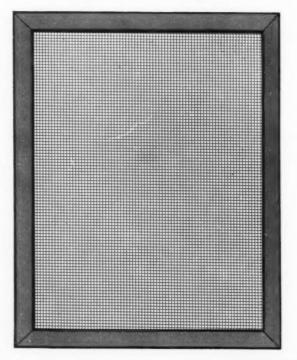
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never rusts-practically everlasting







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Our Decorative Service Department have worked out harmonious color schemes for a number of large public institutions and private homes and will be glad to submit decorated panels for your inspection.

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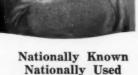
Today this old pride-mark is called a trade-mark.

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# Iong Bell THE MARK ON QUALITY Lumber

Branded lumber was an innovation. That it was a good thing to do has been proved in many ways. For one thing, the thousands of workers in the Long-Bell organization are trying to live up to the pride-mark and what it stands for.

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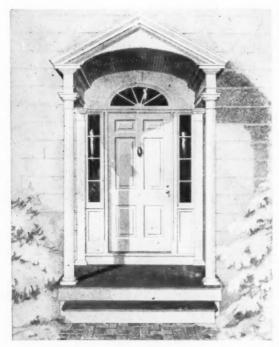


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# Architects who are Artists 2



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If a home requires an English entrance, they draw it If another home demands a colonial stairway or mantel, they devote valuable time drawing these to scale. The time they spend in covering numerous details of this sort averages down their profits.

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# CURTIS











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# CYPRESS "The Wood Eternal"

has no equal for porch construction. It seems to be pretty fully demonstrated that for all porch construction, porch floors, porch columns, steps and rails, the rot-resistant quality of "The Wood Eternal" gives it unequaled *investment value* for this class of work. CYPRESS is famous for "staying put."

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ROCKPORT GRANITE

> Three beautiful tints of Rockport Granite, gray, pink and seagreen, offer the architect a variety that makes possible pleasing architectural designs and distinctive harmonious color combinations.

> In addition, this mediumgrained, even-textured hornblende granite takes a lasting polish that is unknown in the case of micaceous granites or of stones of lesser intrinsic quality.

In SWEET'S CATALOGUE the original colors of Rockport Granite are reproduced, and we would refer architects to them.

Rockport Granite Company Rockport, Mass.

C. Harry Rogers, Treas. and Gen. Mgr.



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Out in the great Northwest, the land of magnificent distances and incomparable scenery, there are beginning to be built buildings in keeping with the immensities of the country. Naturally, among the first of these are to be found hotels, and the one shown herewith typifies in a sense the growing development of this vast section of our continent. That

# SARGENT

Locks and Hardware form a part of the equipment of this modern hotel simply indicates, in a measure, the broad distribution and general adoption of our product.

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Because of the unequaled satisfaction architects, engineers, technical schools, and many of the world's leading industries have found in the uniform quality of National Tracing Cloth.

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Beautiful—grain, hard, strong, dent-resisting **birch**.

Makes finest veneers as well as solid work.

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A Better Window where a

complete Window is wanted



The sash are fitted perfectly—so a re the weatherstrips, the screens, the hardware: Operates smoothly and stays that way. Built like a piano. C's same as comtined separate equipment,

A DOUBLE hung window with 100% opening yet entirely normal in appearance and operation. Both sash disappear entirely leaving the whole opening free and clear.

Screens, full size, come and go at a touch—easy storage—safe yet always convenient and available.

Washed both sides from a standing position on floor. Self-weatherstripped.

But 5½" thick, same as a standard frame and equally available. 126 stock sizes, any sash division. Used wherever double hung windows can be used and more too, for this full opening window does not interfere with blinds, awnings, curtains, draperies, shades, nor with the breeze, and has its own screens, weatherstrip and even hardware.



Take it from the freight car: Build it in place. It's all done then and there. Apply usual trim inside and outside. When ready discard four crating boards. There is the window, finished, complete, screens and all.

The Lunken Window is the core only: A complete working unit ready for use as it arrives from the railroad car. Everything fitted, everything working, everything perfect for it is completely made in one single shop under one single responsibility. Send for our book of details.

# The LUNKEN/WINDOW/C9

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Executive Offices and Works 4018 Cherry Street Cinginnati Ohio ARCHITECTURAL DEPARTMENT 512 Fifth Avenue, New York

Chicago Office and Exhibit 175 West Jackson Boulevard

Boston Washington, D. C. Agencies and working models in 35 towns, including:

Dayton Columbus Jacksonville

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K&H started in business when the high desk, the plug hat and the bulging umbrella were found in the one and two story office buildings of that day. While others centered their efforts on improvements in office equipment, we developed vertical transportation equipment that has made high buildings possible.

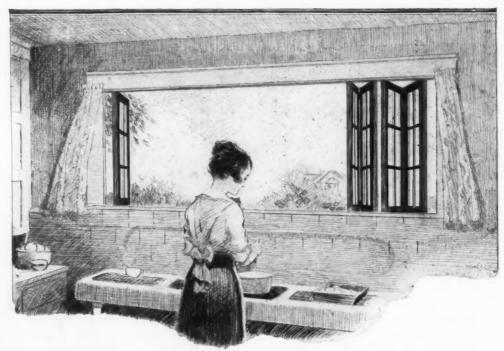
Modern building service is based on the type of engineering which K&H has been furnishing for fifty seven years.

years.

ESTABLISHED 1863

# KAESTNER & HECHT CO.

CHICAGO



# Hoffman Casements for Every Room

THE ease of operation—the ease of cleaning and full ventilation are important in nearly every room in the house.

There are many places too, where Hoffman Casements are exceedingly useful.

Where it seems desirable to place windows as illustrated above—the window that will work most satisfactorily is a Hoffman Casement Window.

They can be easily pushed to either side of the frame, and because they have no operating mechanism, never get out of order.

Women appreciate Hoffman Casement Windows because they never stick and yet they are weather-tight.

We have just issued a picture bulletin, showing a number of Hoffman installations and suggested installations.

Hoffman Casement fixtures have so many advantages which are described in our booklets that they are bound to make the casement more popular than ever before,



If any of your clients are interested in getting the most satisfactory type of window, we shall be very glad to send along our catalog. Architects, contractors and sash manufacturers would find our detail sheets of special interest.

### ANDREW HOFFMAN MFG. COMPANY

901 Steger Building, CHICAGO

The name "Andrew Hoffman" has been identified with the building hardware trade for thirty years.



ENTERTAINING in your own home is a pleasure. The service and arrangements are yours, just as you want them. Your house is attractive because you built it and it reflects

the good taste of your wife and yourself. No apologies or explanations of the landlord's mistakes are necessary.

# Arkansas Soft Pine

is an economic, practical aid to home lovers who want to build this year. It furnishes a lower cost structure, and more particularly a moderate priced yet perfect woodwork for interior use, whether your choice be white enamel or otherwise. Send at once for our fascinating folio on home designs and how this wood may be used to your advantage. Copy will be sent with our compliments.

Arkansas Soft Pine Is Trade Marked and Sold by Dealers East of the Rockies



Arkansas Soft Pine Bureau

611 Boyle Building · Little Rock, Arkansas



"Beira Mar" Telephone Exchange, Rio de Janeiro, Brazil. Canadian Engineering Agency, New York, Architects and Contractors.



# In Far Away Rio

Even down in the tropics, buildings that are designed to house large numbers of people are equipped with

# Von Auprin

### Self-Releasing Fire Exit Latches

The world over, Hun Duprin latches have proven a valuable aid in preventing injury and loss of life from fire-panic. They provide an ever-ready means of exit, releasing the door at a mere touch of hand or body on the cross bar.

Hon Duprin latches are sturdy, strong and never-failing in operation.

Let us send you Catalog No. 12-M, or see "Sweet's," pages 793-797.

VONNEGUT HARDWARE (O. Indianapolis, Ind.



You can make sure of get-

ting the genuine by specify-

ing Bon Duprin Self-Releasing

Fire Exit Latches, as approved by the Underwriters'

Laboratories (Inc.) of the

National Board of Fire Underwriters, Report No. S. A.

163, Guide No. 100-F 24.

"Ipanema" Telephone Exchange, Rio de Janeiro, Brazil. Canadian Engineering Agency, New York, Architects and Contractors.



Appropriate dignity is attained in this bank directors' room by the use of American Walnut paneling and furniture. Photo shows American Exchange National Bank, Dallas, Texas. Mr. H. B. Thompson, Architect, Dallas.

### American Walnut: Best Banks

THE finest traditions of banking, and of architecture, are comparable to the dignity of Walnut throughout the history of fine cabinet-work.

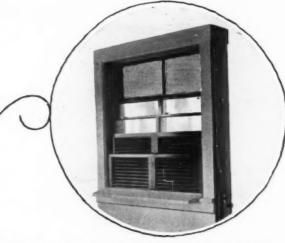
In rich and simple elegance *American* Walnut surpasses the species of this noble wood which have supplied other parts of the world in the past.

And it is gratifying, as well as advantageous in a practical sense, to know that though a solid *forest* of American Walnut is unknown, there is scattered through our wonderful hardwood forests enough American Walnut to serve the very best of us for generations to come.



The beautiful brochure on American Walnut has been called delightful by many readers. It is ready for you on your request. (Kindly use your business stationery.)

AMERICAN WALNUT MFRS.' ASSN. Room 1001 616 S. Michigan Blvd., Chicago



THE cost of an old style sleeping porch, if invested in WINDOW-WALL gives the home several open-air sleeping rooms at less cost than one.

WINDOW-WALL eliminates window shades and awnings, thereby reducing upkeep. Old style sleeping porches are made **better** sleeping porches by installations of

# WINDOW-WALL (For the Sleeping Porch de Luxe)

Glass sash and metal All-Weather Sash Ventilator are in same frame. Adjustable louvers of metal sash insure perfect ventilation with complete weather protection and privacy.

Equally efficient for sun-parlors, detached sleeping quarters, summer cottages and for clubs, hospitals, apartment houses and other buildings.

# The Adjustable Metal Ventilator for Windows-Transons-Door Panel

is an adjustable ventilator section for door panels, transoms and windows. Installed in door panels, instead of old style transoms, it costs much less.

Most progressive architects are specifying WINDOW-WALL—do you? Write today for complete data.

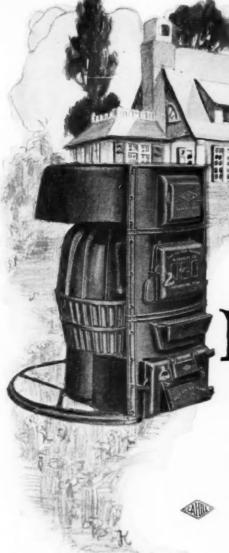
### THE CASKEY-DUPREE MFG. CO.

Marietta, Ohio

WINDOW-WALL DEPARTMENT

Also Manufacturers of "Airolite," the Adjustable Metal Ventilator

Sales Agencies in all principal cities.



### Cahill Fireplace Fixtures

You will be interested in our Grate Folder, telling all about our Grates, Firebaskets, Andirons, Wrought and Cast Iron trimmings, Where may we send your copy?

Cahill urnaces

AHILL Furnaces are the result of forty years' intensive study of heating problems and their most effective solution, and are, so far as is humanly possible, faultless in construction and operation. Only the best grade of iron goes into their castings. The sheet metal jackets are made of galvanized iron and are impervious to the wear and tear of use, however extended or severe. furnace is subjected to exhaustive tests before leaving our factory, and the units coordinate into a perfect whole and are easily assembled and mounted. Cahill Furnaces, in short, are made to give lasting satisfaction to the owner and reflect credit upon the judgment of the architect who specifies them.

Our Advisory Department is at your disposal. Give us an idea of your heating requirements, and let our engineers submit plans and helpful suggestions.

CHATTANOOGA ROOFING & **FOUNDRY** CHATTANOOGA TENNESSEE

Cahill Products Are Sold Exclusively Through Recognized Dealers



# The Exterior



When you specify SWP (Sherwin-Williams Paint—Prepared) for painting the exterior of a wood building, you know that you are specifying more than a material. You are specifying paint plus. You are specifying a paint which is made of honesty, experience and scientific manufacturing methods, just as much as it is made of the purest of white lead, oxide of zinc, linseed oil, turpentine and japan dryer. That is why you know "SWP" will cover more surface, weal longer, look better, and why it will not crack, chalk or peel. Our new "SWP" color folders, showing the thirty-two attractive colors in which this paint is manufactured, should be in your files for ready reference. If you haven't one, write.

Address all Communications to Department of Architectural Service

THE SHERWIN-WILLIAMS COMPANY
884 Canal Road Cleveland, Ohio

SHERWIN-WILLIAMS PRODUCTS

ARCHITECTURAL FINISHES



1 3/1/1

# for convenience

When we specify GF Steel Tile in our home office notes, we designate it by the little cryptic symbol S/T - S/T is the convenient way of writing—

# GF Steel Tile

 $T^{\rm HE}$  actual product is more convenient for your use, when compared with other building materials of its scope

GF Steel Tile conserve time, money and patience They lessen the dead load weight of floors They eliminate useless concrete and increase live load capacity

GF Steel Tile are a necessity and a labor saving factor in these days of feverish building activities. They occupy from 50 to 60% of the cubical contents of the floor. They concentrate essential concrete and make possible maximum strength with minimum weight.



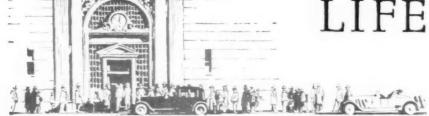
Your copy of the new GF Steel Tile catalog is waiting for your address Ask for Form A-487.

GF Steel Tile permit lighter girders, beams, columns and footings. They save  $\emph{big}$  in time, labor and money.

# The General Fireproofing Co.

BRANCHES
BUFFALO CHICAGO BOSTON MILWAUKEE KANSAS CITY
MINNEAPOLIS SAN FRANCISCO PHILADELPHIA OMAHA ATLANTA

# Giving a Building



TAKE the Hinges from any building and you strip it of its usefulness. You rob the engine of its power. From entrance to exit they are important. For they make doors possible. They afford activity—LIFE.

The use of hinges is never disputed. It is their selection that is important. To select the best is to guarantee life-long service. To be careless is to court trouble—noisy, squeaking, sagging doors.

McKinney Hinges and Butts have been on the market for fifty years. It was the name "McKinney" that first made it possible to select a really standard hinge—one that combined artistic design with sturdy, durable workmanship.

From the small cupboard door to the massive portal, McKinney Hinges range in size, design and purpose. They fit every architectural plan perfectly! The name "McKinney" in your specification means added service to your client.

Architects and Builders find the McKinney illustrated catalog a real help in matching out-of-the-ordinary designs and in meeting standard hinge needs. If you do not have a copy of this book in your files we will be glad to furnish you with the latest edition.

McKINNEY MANUFACTURING CO., Pittsburgh Western Office, Chicago. Export Representation

# MCKINNEY Hinges and Butts

Also manufacturers of McKinney garage and farm building door hardware, furniture hardware and McKinney One-Man Trucks



"By frost, nor fire, nor flood, nor even time, is well-burned cray destroyed"



#### You'll Find This Book Valuable—

as it contains complete details and methods of Hollow Building Tile Construction.

It is an essential reference book for every architect's office. All the problems arising when building with Hollow Tile are explained fully and illustrated profusely from photographs and tracings.

We will gladly send a complimentary copy of this handbook to architects who request it.

#### HOLLOW TILE

The Most Economical Form of Permanent Construction

THE HOLLOW BUILDING TILE ASSOCIATION

Representing America's Leading Manufacturers

111 WEST WASHINGTON STREET, CHICAGO, ILLINOIS



#### Two Sister Ships Join the Astoria Fleet

Recognizing the frequent inability to secure sufficient bottoms for the transportation of our required volume of Mahogany logs we have recently added two modern ships to the Astoria Fleet.

Backing up the promise to serve with the ability to fulfill the promise has, over a period of nearly fifty years, made us the Country's largest organization devoted to the production, manufacture and distribution of Mahogany Lumber and Veeners.

#### Astoria Mahogany Company, Inc.

347 Madison Avenue, New York

Successors to

Huddleston-Marsh Mahogany Co. Astoria Veneer Mills & Dock Co. F. W. Kirch, Inc.

Mills and Yards: Long Island City, New York



BRANCHES:

44 North Market Avenue Grand Rapids, Mich.

2256 Lumber Street Chicago, Ill.

## Broad co-operation with every great Electrical Development



THIS advertisement which will be read by millions of people in the Saturday Evening Post, Literary Digest, Factory, System and Manufacturers' Record, is an example of what Habirshaw means by "broad co-operation with every great electrical development."

Habirshaw has discovered that in helping those whom it serves it is helped in turn and industry advances.

Now it lends its aid to the railroads and traction interests because their need is greatest at present. Transportation companies need increased returns for carrying out improvements and in order to keep pace with the ever-increasing demands of commerce.

Habirshaw believes that the surest way of gaining public acceptance of adequate increases is by emphasizing railway service and its importance to national life. Habirshaw has devoted some of its own advertising space to drive home to the American public a sense of the debt it owes to transportation enterprise.

Habirshaw Wire Manufactured by

Habirshaw Electric Cable Ca.

10 East 43rd Street, New York



Habirshaw Wire Distributed by

Western Electric Company

Offices in All Principal Cities

### HABIRSHAW

"Proven by the test of time"

Insulated Wire & Cable



Duplexalite in the Welte Mignon Studios, Fifth Avenue, New York

#### A comfortable light to see by

The Duplex Lighting system is the natural method of controlling the light from the MAZDA C lamp. In the above photograph note the uniform distribution of light to all parts of the room and the absence of glare.

We have representatives throughout the country and shall be glad to have our nearest one get in touch with you at your request.

#### **DUPLEX LIGHTING WORKS**

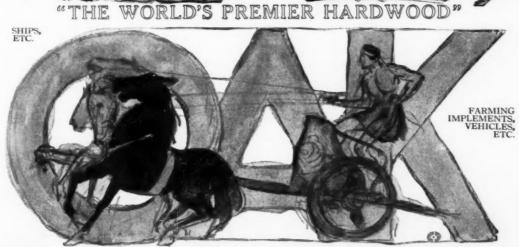
of General Electric Company 6 West 48th Street New York City

Duplexalite
"The light to live with" is inside









AMERICAN OAK is PLENTIFUL, ECONOMICAL, INDISPENSABLE.

ADMIRE IT. TRUST IT. INSIST ON IT. SPECIFY IT. USE IT. WRITE us. TELL us. ASK us.

We will give you a straight personal letter in reply—WITH ALL THE FACTS YOU WISH FOR. Ask For Booklet—FREE

AMERICAN HARDWOOD MFRS. ASSOCIATION, 1401 Bank of Commerce Bldg., Memphis, Tenn.

The Redwood log seen buried here was discovered while clearing a path for a ratiroad switch-back in Del Norse County, California. Part of the log was cut away, and although it was estimated that is had fallen is hundred years ago, the timber was perfectly sound—fit for merchantable lumber.



#### 600 Years in the Ground, Still Good Lumber

A spruce tree was discovered growing around and over a fallen Redwood log half buried in the ground. The annular rings of the spruce showed it to be 600 years old. In spite of the fact that the Redwood log had been buried all these centuries it was perfectly sound.

Resistance to rot is a peculiar quality of Redwood. A natural preservative permeates the fibres of this wood, rendering it highly resistant to decay-producing fungi and the attacks of insects.

Because of this quality builders and engineers find Redwood invaluable. Redwood also resists fire, which quality adds to its value as an all-purpose building and industrial lumber. Resistance to fire is due to the absence of pitch or resin in Redwood.

Also, Redwood is easily worked, and when properly seasoned will not shrink or warp. Manufacturers of incubators, patterns, pipe organs, textile machinery, etc., find Redwood highly desirable. Takes paint exceptionally well.

Gradually increasing knowledge of the unusual and peculiar properties of Redwood for many building, industrial and specialty purposes, has resulted in a demand for this lumber to the extent of taxing the present facilities of the Redwood mills. The mills are making every effort to enlarge their production to take care of the increased demand. There has also been a persistent demand from lumber users and perspective users for further information about this remarkable wood, and this series of advertisements is for the purpose of providing such information.

CALIFORNIA REDWOOD ASSOCIATION 720 EXPOSITION BUILDING, SAN FRANCISCO

California Redwood
Resists Fire and Rot

# Modern Gines

#### Boilers

Mills Water
Tube
Smith with
Smokeless Furnace
Smith without
Smokeless Furnace
W-17 Smith Service
Menlo
H.B.

#### Radiators

Princess Direct Princess Wall

## H. B. SMITH CO. Boilers & Radiators

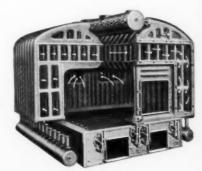
Clear skylines of modern cities are made possible by efficient heating systems. Business demands not only sufficient warmth for comfort, but also elimination of the wasteful smoke nuisance through proper combustion.

The Smith boiler with smokeless furnace answers this demand completely. It is a boiler of supreme efficiency.

The H. B. Smith Co. boilers and radiators are known to owners, architects and builders everywhere for their high merit. This reputation has been established over a period of seventy years.



Write for detailed information.



#### The H.B. SMITH CO.

SALES OFFICES & WAREHOUSES

New York · Boston · Philadelphia · Westfield, Mass. 10 E. 39 St. 138 WASHINGTON ST. 17 PLARCH STS 57 MAIN ST.

#### CLINTON WELDED SHEATHING CLINTON ELECTRICALLY WELDED FABRIC CLINTON WIRE LATH

PRODUCTS that have won the favor of the architectural profession generally —the wire lath of successful application since 1856, the electrically welded wire of unvarying high quality, the welded sheathing of highly successful time and plaster saving development.

> THESE, AS WELL AS ALL OTHER CLINTON WIRE PRODUCTS ARE NOW MANUFACTURED BY

WICKWIRE SPENCER STEEL CORP.

Worcester, Mass.

Buffalo, N. Y.

#### Successor to

Clinton-Wright Wire Company

Wickwire Steel Company Clinton Wire Cloth Company Morgan Spring Company

Spencer Wire Company Wright Wire Company National Manufacturing Company

New York Philadelphia

Chicago

San Francisco



Commodore Hotel



Warren and Wetmore Architects







## MERICA

### SASH CHAIN

MERICAN Sash Chain is installed throughout the magnificent Commodore Hotel illustrated

American Sash Chain is also installed in thousands of other thoroughly modern and perfected office, industrial, and other buildings, throughout the length and breadth of the United States.

American Sash Chain is made of the finest stock obtainable, in sizes standardized to correspond with various weights of sash.

Write for samples and prices

AMERICAN CHAIN COMPANY, Inc.

BRIDGEPORT, CONN.

U. S. A.

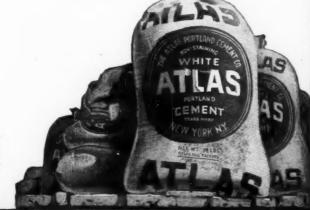
## DEPENDABILITY

#### ATLAS-WHITE

is the ideal cement for making Cast Stone—hard, weatherproof, durable stone—in pure white or an infinite variety of colors and textures, with a minimum labor of shaping, whether simply molded or richly or namented.

#### THE ATLAS PORTLAND CEMENT COMPANY

New York Boston Philadelphia Birmingham Chicago Dayton Minneapolis Des Moines St. Louis



Upon request we will promptly send to architects one or all of three books: "Color Tones in Stucco," "Non-Staning Mortar for Pointing, Setting and Backing," "Cast Stone."

ATLAS WHITE

#### AMERICAN BRIDGE COMPANY

Hudson Terminal-30 Church Street, New York

Manufacturers of Steel Structures of all classes
particularly BRIDGES AND BUILDINGS

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BUILDINGS that are to be a permanent monument must be constructed with long-lasting materials.

The concrete floors of this Elk Club House are hardened and dustproofed with "ANTI-HYDRO." So is the concrete driveway.

The foundation walls and basement are waterproofed w i t h "ANTI-HYDRO."

Permanence and "ANTI-HYDRO" are synonymous when applied to concrete.

Useful Architectural specifications gladly sent on request.



B. P. O. ELKS CLUB HOUSE, JERSEY CITY, N. J. WILLIAM NEUMANN, Architect DE RISO BROS., Inc., Contractors

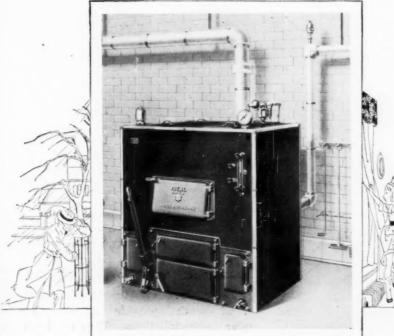


## "ANTI-HYDRO"

ANTI-HYDRO WATERPROOFING CO.
299 Broadway, New York



#### The De Luxe Heating Service





Estimate by usual methods the fuel cost of warming the OLD or NEW building for a heating season. Divide by 3. The result will be the actual fuel saving that can be effected with the

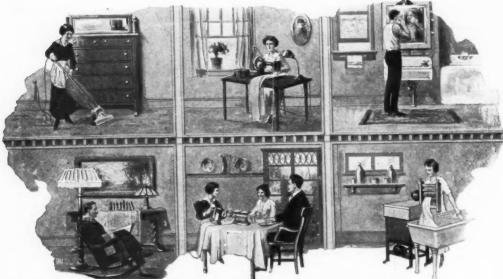
#### New IDEAL Type "A" Heat Machine

The precise Heating Laboratory tests prove an economy and an efficiency yielding the largest interest return (33½ per cent) possible in any feature of household equipment. Ask for the heat-chart catalog of IDEAL Type "A" Boilers.

#### AMERICAN RADIATOR COMPANY

Sales Branches and Show Rooms in all Large Cities.

Makers of the world-famous IDEAL Boilers and AMERICAN Radiators



## COMPLETE Electrical Service







WHEN planning electrical installations, make sure of the quality of materials used and of the quantity of service outlets provided.

National Products—for interior electrical work—provide quality and quantity installations. They are built to the highest standards of Quality, Safety and Service.

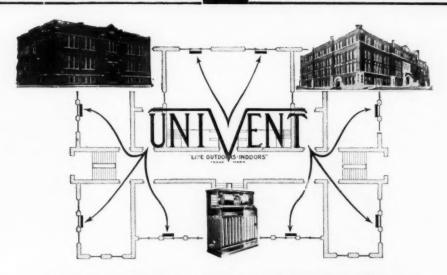
Our bulletins should be in your files. Copies gladly furnished upon request.

#### National Metal Molding 6.

General Offices:

Fulton Building, Pittsburgh, Pa.

SHERARDUCT PATENTED



## YOUR IDEAS ON VENTILATION CAN NO LONGER BE DEFEATED

THE Univent system, simple, practical, efficient, economical, easily measures up to what a 100% ventilating system should be because it delivers the quantity of fresh air it is set to deliver and nothing can stop its delivery until the power is shut off.

The air in the Univent does not have to pass through dirty, uncleanable, unsanitary flues or chambers. It is delivered pure into the room, direct from the outside, and the fresh air is diffused into every nook and corner of the room—without draft.

No extra radiators are needed in a Univent equipped room, as each unit contains a **double radiator** which heats the air sufficiently for both ventilating and heating, delivering at a rate of from 600 to 1500 cubic feet of fresh air per minute.

The Univent System is designed on a unit basis. Each room is ventilated and heated as a unit by its own individual Univent.

Buildings using Univents need no vents or ducts, the cost of building is reduced, power bills are cut, fuel bills are less, fire hazards are minimized, maintenance costs are negligible, extra rooms are made available and often a whole story of the building is saved.

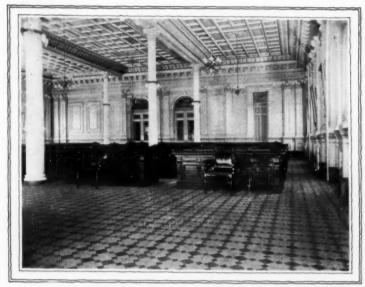
See complete specifications in Sweet's Catalogue, pages 1162 to 1182, inclusive. Catalogue and Engineering Data Book on request. Write Dept. B.



rM.	AIL THIS	COUPON	TODAY
Please s	end me co describing		alog and inf r- t. I am inter-
Kind of	Building.		
Name			*******
Address			********



crons rones to me a men se connectiones



Tive hundred square yards of Armstrong's Parquetry Iniaid Linoleum, No. 652, were used in this installation.

#### A "Stately," Serviceable Floor

THIS linoleum floor in the Oregon State House demonstrates admirably the distinct advantages of this modern material. In such an edifice an atmosphere of dignity is imperative, and yet the floor must have certain practical qualities. Armstrong's Parquetry Inlaid Linoleum fully meets these requirements. It is especially rich when waxed, adapted to fireproof construction, quiet, easily cleaned, inexpensive to maintain, and exceedingly durable when cemented down firmly over felt paper as a permanent floor.

No doubt there are occasions where you could employ an Armstrong's Linoleum Floor to advantage. Plates showing the newer designs and pleasing colorings are at your disposal without charge, also tables of comparative grades, gauges, weights, etc. A request will place you under no obligation.

Armstrong Cork Company, Linoleum Dept., Lancaster, Pa.

Armstrong's Linoleum
For Every Room (A) in the House

#### A Modern Home Needs Modern Equipment

It hasn't been very long ago when the old wash bench and tub were in vogue. In those days they heated their water in copper kettles on top of the wood range.

SOME women still use the old method of heating water on the gas range, dripping it from stove to tubs. Most of their day is spent in handling water.

Their more fortunate neighbor, with a Pittsburg Automatic Gas Water Heater in the cellar, does her wash in half the time, with half the worry and work, and at half the expense.

If the Pittsburg Automatic Gas Water Heater is anything it is modern. At a turn of the faucet it supplies piping hot water cheaper than it could be heated in any other way.

Be sure when making your plans to leave an extra opening in the chimney breast, as all automatic gas water heaters must have a flue opening.

Also be sure to "write in" Pittsburg Automatic Gas Water Heater. If in doubt as to the size to specify see Sweet's Architectural Edition, page 1294 to 1297, or, write to us for sample specifications.

#### PITTSBURG WATER HEATER CO. PITTSBURGH, PA.

Offices and Display Rooms in Principal Cities

Pittsburg Automatic Gas Water Heaters

## Bostwick ( TRUSS-LOOP

#### "Makes plaster permanent"

G UARD the time and painstaking labor you give to the decoration of interior wall and ceiling surfaces by making sure that the plaster on which your work will be carried out is permanent. Do not let cracking, sagging or settling blotch the results.

Bostwick "Truss-Loop" metal lath, with its rigid loops and unyielding steel trusses, holds the plaster surface in a grip which only a hammer can loosen.

#### The Bostwick Steel Lath Co. Niles, Ohio

Originators and Leaders in Metal Lath



McLaughlin Gormley King Co., Minneapolis, Bell, Tyrie & Chap-man, Architects. R. J. Cheney & Co., Contractors. 40,000 sq. ft. of Masterbullt Floors, laid 8 years ago.

Read this letter. 40,000 sq. ft. of concrete floors, laid in 1912, and still going strong—as good as new.

#### McLAUGHUN GORMLEY KING CO.

Jan. 9th, 1920. The Master Builders Co., Cleveland, Ohio.

Attention Sales Department.

Attention Sales Department. Gentlement:
We acknowledge receipt of your letter of the 7th and in reference to your inquiry regarding the concrete floors laid in our building some eight years ago, beg to advise that these floors have proved a very satisfactory investment in practically the same condition as when laid. when laid.

when laid.

We consider their added cost a very good investment indeed.

Yours very truly,

McLaughlin Gormiey King Co.

#### The Service of Masterbuilt Floors

Eight years ago, when the Masterbuilt Floors were laid for this concern, the Masterbuilt idea was almost revolutionary. Add a hardening element, to water, sand and cement—ridiculous! But those who were responsible for the job had confidence that the addition of Master Builders Concrete Hardner would make a more enduring floor—one wearproof, dustproof and waterproof. And Time has told the story and vindicated the principle they were converted to.

Time—the great "show-up"—has demonstrated in scores and scores of similar cases that Master Builders had the solution to the concrete floor problem when they introduced their Hardner and Method.

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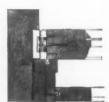


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Sectional View of Side Jamb showing Track and Weathering

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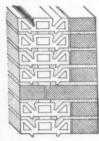
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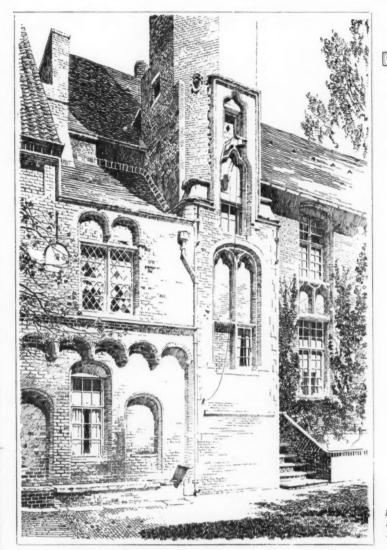
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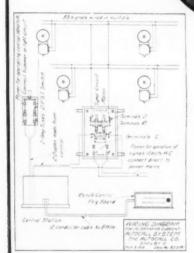


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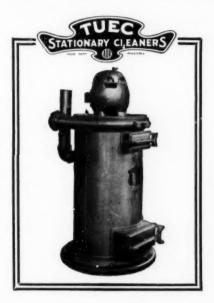
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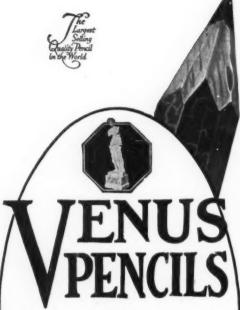
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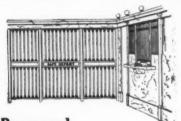
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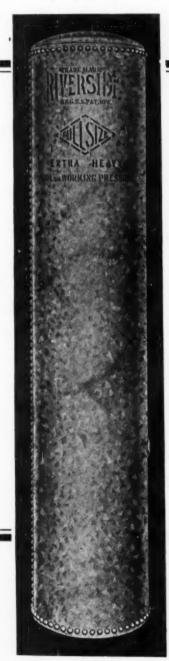
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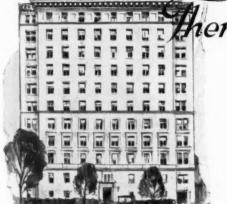
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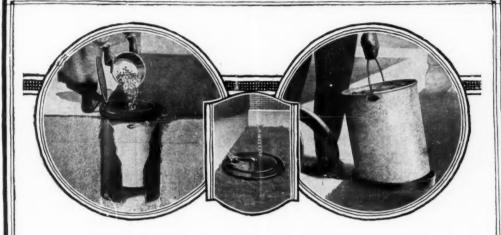
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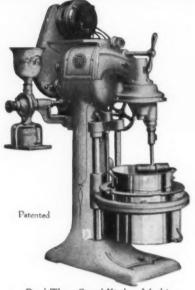
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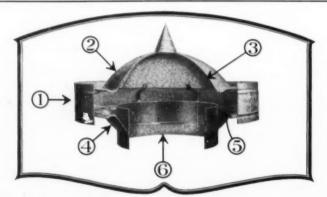
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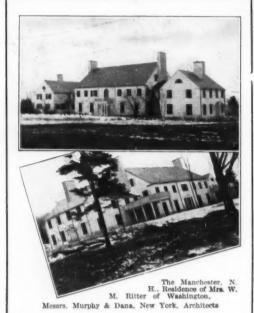
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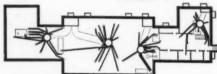
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Cellar Plan Showing Position of Four Heaters

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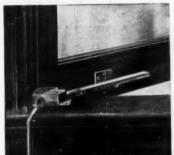


Fig. 1



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Fig. 2

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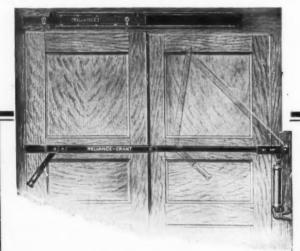
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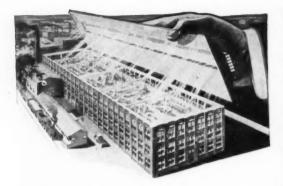
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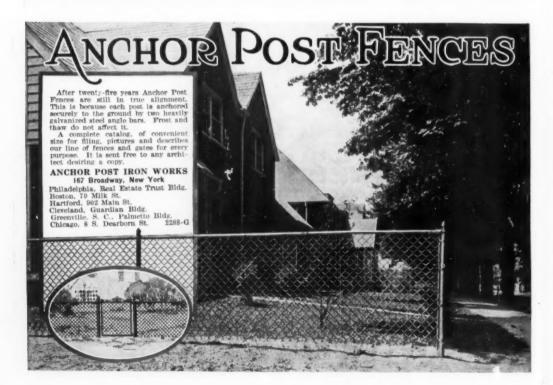
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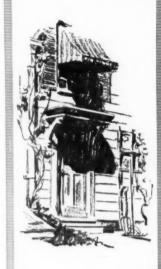
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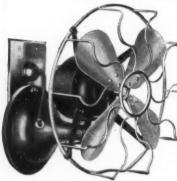
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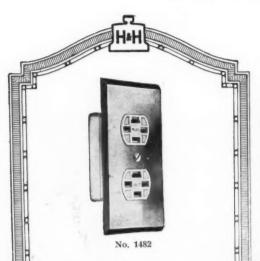
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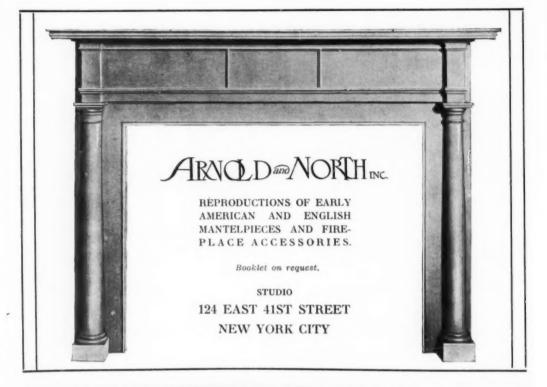
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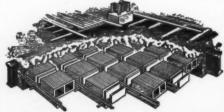
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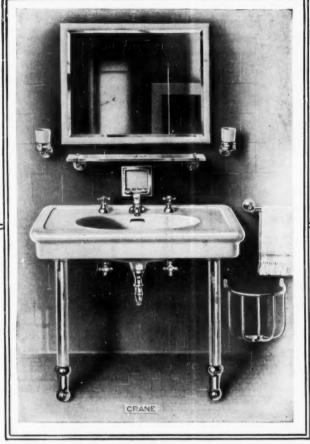
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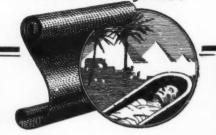
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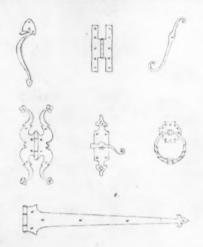
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Bethel White	Woodbury Granite Co., Hard- wick, Vt.	Bethel, Vt	Coarse inclined to Medium.	White—faintly mot- tled with Gray.	Quartz-Monzonite.
Mount Airy	North Carolina Granite Corp., Mt. Airy, N. C.	Mount Airy, N.C	Medium	Very Light Gray	Biotite.
Do	Lemmerman & Hoffman Gr. Co., Mt. Airy, N. C.	do	do	do	Do.
Do	Mt. Airy Granite Cutting Co., Mt. Airy, N. C.	do	do	do	Do.
Do	J. A. Sargent Granite Co., Mt. Airy, N. C.	do	do	do	Do.
North Jay	Maine & New Hampshire Gr. Corp., North Jay, Me.	North Jay, Me	Fine	Very Light Gray	Biotite-Muscovite.
Chelmsford	H. E. Fletcher Co., West Chelmsford, Mass.	West Chelmsford, Mass.	Medium	Light Gray	Muscovite-Biotite.
Victoria White	Milford Pink-Victoria White Gr. Co., Milford, Mass.	Fitzwilliam, N.H	Fine	do	Biotite-Muscovite.
Milford, N. H	Lovejoy Granite Co., Milford, N. H.	Milford, N.H	Fine inclined to Medium.	do	Quartz-Monzonite.
Concord	John Swenson Granite Co., Concord, N. H.	Concord, N.H	Fine to Medium	Light to Medium Gray.	Muscovite-Biotite.
Do	New England Granite Works, Westerly, R. I.	do	do	do	Do.
Westerly Blue- White	do	Westerly, R.I	Fine	Bluish Gray	Quartz-Monzonite.
Woodbury Gray	Woodbury Granite Co., Hard- wick, Vt.	Woodbury, Vt	Medium	Medium Gray	Biotite.
Rockport Gray	Rockport Granite Co., Rock- port, Mass.	Rockport, Mass	Medium to Coarse.	Medium Gray, slight bluish-green tinge.	Hornblende.
Stonington Pink- Gray	Rodgers Granite Corp., 271 W. 125th St., New York City.	Deer Iale, Stoning- ton, Me	Coarse	Pinkish-Lavender tinted, Medium Gray.	Biotite.
Goss Pink	John L. Goss Corp., Stoning- ton, Me.	Crotch Island, Stonington, Me.,	do	do	Do.
Conway Pink	Maine & New Hampshire Gr. Corp., North Jay, Me.	Redstone, N.H	do	Light Pink Mottled with large gray and small black	Do.
Milford Pink	Milford Pink-Victoria White Gr. Co., Milford, Mass.	Milford, Mass	Medium to Coarse.	spots. Light to Medium Pink, black mica spottings.	Do.
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Moose-a-bec Red	Rockport Granite Co., Rock- port, Mass.	Jonesport, Me	Coarse	Dark Reddish-Gray with white and pinkish Feldspar.	Do.
Rockport Sea- Green	do	Rockport, Mass	Medium to Coarse.	Dark Olive-Green- Gray with Black Spottings.	Hornblende.
Conway-Green	Maine & N. H. Granite Co., North Jay, Me.	Redstone, N.H	Coarse	Dark Yellowish- Greenish-Gray with	Biotite-Hornblende
Somes Sound	Booth Bros. & H. I. Granite Co., 208 Broadway, New York City.	Mt. Desert, Me	Coarse inclined to Medium.	Black Spottings. Light Grayish-Buff	Biotite.
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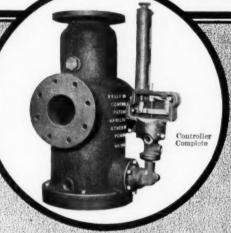
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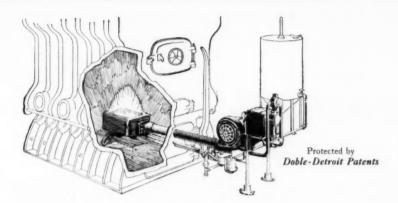
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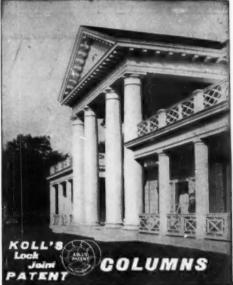
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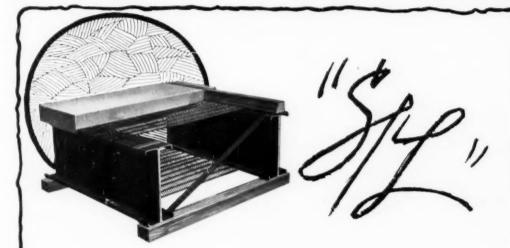
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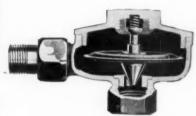
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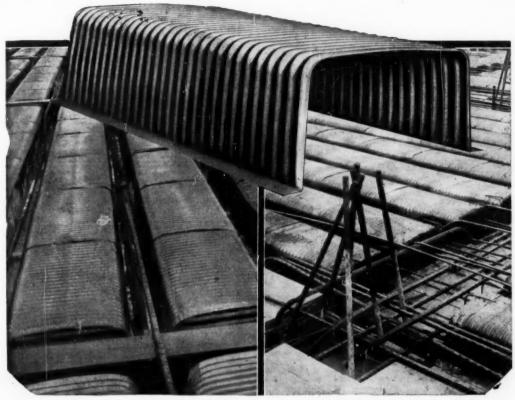
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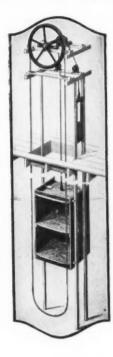
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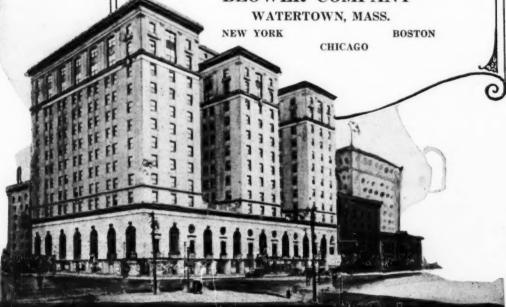


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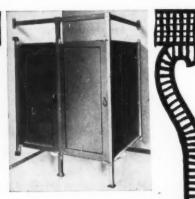
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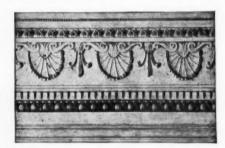


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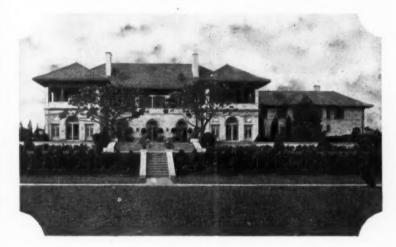
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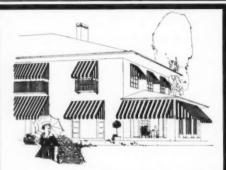
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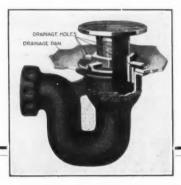
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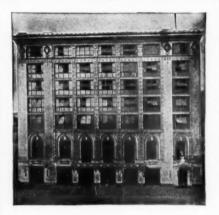
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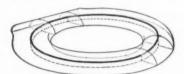


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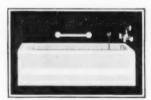
1920

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Hotel Fort Shelby, Detroit: Schmidt, Garden & Martin, Chicago, Architects; John Degnan, Inc., Chicago, Plumbers; A. Harvey's Sons Mig. Co., Detroit, Jobbers

# And HOTEL FORT SHELBY



Kohler "Viceroy" Built-in Bath Recess Pattern

Dynamic Detroit's newest hostelry—the Hotel Fort Shelby—was planned with one idea in mind: the comfort and convenience of the guest. It was a foregone conclusion, then, that the 508 plumbing fixtures would be of Kohler Enameled Ware. For these snow-white, glistening products of utility, beauty and durability are found in leading hotels throughout the land. This public favor extends, as well, into homes, apartments, clubs and institutions, where the easily cleaned Kohler enamel renders the products which it armors, invitingly spotless and prolongs their usefulness through the years.

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MANUFACTURERS OF ENAMELED PLUMBING WARE AND KOHLER AUTOMATICIPOWER AND LIGHT 110 VOLT D. C.



Sanymetal has been installed in the factories of the Proctor & Gamble Co., Ivorydale, Cincinnati, Ohio.

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The answer to this question indicates pretty fairly the real worth of established products.

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are to be found in the factories and other buildings of a large number of representative American industries.

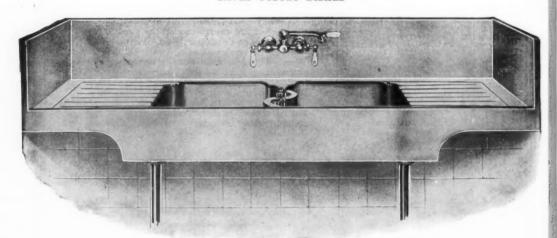
The R. F. CARPENTER MFG. CO.

978 East 64th Street, Cleveland, Ohio Boston New Yor A new catalogue recently out contains a partial list of SANYMETAL installations. It also shows interestingly by reproduced photographs of actual installations the highly adaptable, sanitary and serviceable character of Sanymetal. Write for your copy.

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With Drainboard Combined

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## A Quarter Turn of the Handle Opens or Closes the

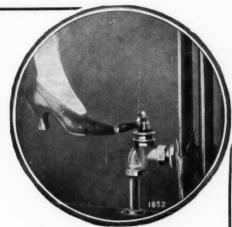
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## **VALVE**

It moves with a touch of the foot or hand—quarter turn does the trick. Prevents opening a window to cool a room quickly (with resultant waste of steam and coal) for it is easier to operate the radiator with Gordon Valve than it is to open windows.

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No stooping. The slightest touch of the foot operates the valve.

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C. Loose joint connection between valve steam and disc—insuring perfect seating of disc.

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> E. Mineral composition disc, no metal, sulphur nor rubber. Disc and seat both machine ground to a perfect taper surface, giving perfect seat.

A combination proof against rusting, wedging, cutting, abrasion and leaking.

F. Full pipe size unobstructed passage through the disc. No obstruction to passage of steam as in ordinary disc valves.

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See Sweet's Architectural Catalog, page 1365, for Specification-Write for Catalogs,

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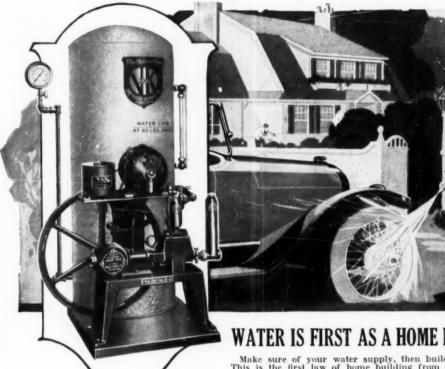
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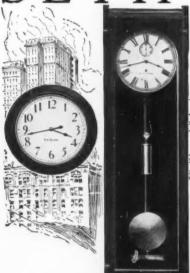
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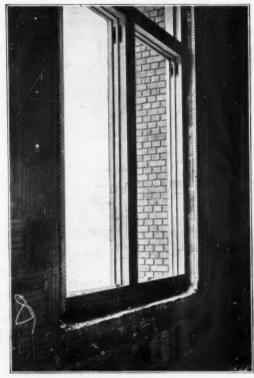
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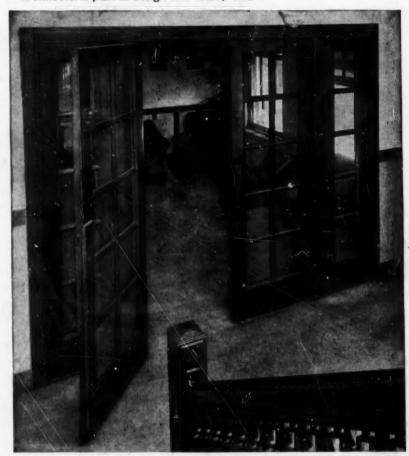


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"S. O. S."

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